



SEQUENCE LISTING

<110> Saxon, Andrew
Zhang, Ke
Zhu, Daocheng

<120> FUSION MOLECULES AND TREATMENT OF
IgE-MEDIATED ALLERGIC DISEASES

<130> UC067.002A

<140> US 09/847,208

<141> 2001-05-01

<160> 177

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 696

<212> DNA

<213> Homo sapiens

<400> 1

```
gagcccaaat cttgtgacaa aactcacaca tgcccaccgt gcccagcacc tgaactcctg 60
gggggaccgt cagtcttctt cttcccccca aaacccaagg acaccctcat gatctcccgg 120
accctgagg tcacatgcgt ggtggtggac gtgagccacg aagaccctga ggtcaagttc 180
aactggtacg tggacggcgt ggaggtgcac aatgttaaga caaagccgcg ggaggagcag 240
tacaacagca cgtaccgtgt ggtcagcgtc ctaccgtcc tgcaccagaa ctggatgaat 300
ggaaaggagt acaagtgcaa ggtctccaac aaagccctcc cagcccccat cgagaaaacc 360
atctccaaag ccaagtgcga gccccgagaa ccacaggtgt acaccctgcc cccatcccgg 420
gatgagctga ccaagaacca ggtcagcctg acctgcctgg tcaaaggctt ctatcccagc 480
gacatcgccg tggagtggga gagcaatggg cagccggaga acaactacaa gaccacgcct 540
cccgctgctg actccgtcgg ctcttcttct ctctacagca agctcaccgt ggacaagagc 600
aggtggcagc aggggaacgt cttctcatgc tccgtgatgc atgaggctct gcacaaccac 660
taccagcaga ggagcctctc cctgtctccg ggtaaa 696
```

<210> 2

<211> 330

<212> PRT

<213> Homo sapiens

<400> 2

```
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
1      5      10      15
Ser Thr Ser Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
20     25     30
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
35     40     45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
50     55     60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65     70     75     80
Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
85     90     95
Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
100    105    110
Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
115    120    125
```

BL
 cont.

Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	
	130					135					140					
Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	
145					150					155					160	
Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Val	Lys	Thr	Lys	Pro	Arg	Glu	
			165					170						175		
Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	
			180					185					190			
His	Gln	Asn	Trp	Met	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	
		195				200					205					
Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Val	
	210					215					220					
Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	
225					230					235					240	
Leu	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	
			245						250					255		
Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	
			260					265					270			
Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Val	Gly	Ser	Phe	Phe	
		275					280					285				
Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	
	290					295					300					
Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Gln	
305					310					315					320	
Gln	Arg	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Lys							
				325					330							

<210> 3
 <211> 232
 <212> PRT
 <213> Homo sapiens

<400> 3

Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	
1				5					10					15		
Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	
		20						25					30			
Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	
	35						40					45				
Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	
	50					55					60					
Asp	Gly	Val	Glu	Val	His	Asn	Val	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	
65					70					75					80	
Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	
				85					90					95		
Asn	Trp	Met	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	
		100						105					110			
Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Val	Gln	Pro	
		115					120					125				
Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	
	130					135					140					
Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	
145					150					155					160	
Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	
			165					170						175		
Lys	Thr	Thr	Pro	Val	Leu	Asp	Ser	Val	Gly	Ser	Phe	Phe	Leu	Tyr		
			180					185					190			
Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	
		195				200						205				
Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Gln	Gln	Arg	

210
Ser Leu Ser Leu Ser Pro Gly Lys
225 230

220

<210> 4
<211> 1445
<212> DNA
<213> Homo sapiens

<400> 4
tccacacaga gccatccgt ctcccccttg acccgctgct gcaaaaacat tccctccaat 60
gccacctccg tgactctggg ctgcctggcc acgggctact tcccggagcc ggtgatgggtg 120
acctgggaca caggctccct caacgggaca actatgacct taccagccac caccctcacg 180
ctctctgggtc actatgccac catcagcttg ctgaccgtct cgggtgctgt ggccaagcag 240
atgttcacct gccgtgtggc acacactcca tcgtccacag actgggtcga caacaaaacc 300
ttcagcgtct gctccaggga cttcaccccg ccacccgtga agatcttaca gtcgtcctgc 360
gacggcggcg ggcacttccc cccgaccatc cagctcctgt gcctcgtctc tgggtacacc 420
ccagggaacta tcaacatcac ctggctggag gacgggcagg tcatggacgt ggacttgtcc 480
accgcctcta ccacgcagga gggtagctgt gcctccacac aaagcgagct caccctcagc 540
cagaagcact ggctgtcaga ccgcacctac acctgccagg tcacctatca aggtcacacc 600
tttgaggaca gcaccaagaa gtgtgcagat tccaaccgga gaggggtgag cgcctacct 660
agccggccca gcccggttga cctgttcatc cgcaagtgc ccacgatcac ctgtctgggtg 720
gtggaccttg caccagcaa ggggacctg aacctgacct ggtcccgggc cagtgggaag 780
cctgtgaacc actccaccag aaaggaggag aagcagcgca atggcacgtt aaccgtcacg 840
tccaccctgc cgggtggcac ccgagactgg atcgagggg agacctacca gtgcagggtg 900
accaccccc acctgccag ggccctcatg cgggtccaga ccaagaccag cggcccgctg 960
gctgccccgg aagtctatgc gtttgcgacg ccggagtggc cggggagccg ggacaagcgc 1020
accctcgctt gcctgatcca gaacttcatg cctgaggaca tctcggtgca gtggctgcac 1080
aacgaggtgc agtcccggga cggccggcac agcagcagc agccccgaa gaccaagggc 1140
tccggttctt tcgtcttcag ccgcctggag gtgaccagg ccgaatggga gcagaaagat 1200
gagttcatct gccgtgcagt ccatgaggga gcgagcccct cacagaccgt ccagcgagcg 1260
gtgtctgtaa atccccgtaa atgacgtact cctgcctccc tccctcccag ggctccatcc 1320
agctgtgcag tggggaggac tggccagacc ttctgtccac tgttgcaatg accccaggaa 1380
gctaccccc ataaactgtg cctgctcaga gccccagtac acccattctt gggagcgggc 1440
agggc 1445

<210> 5
<211> 427
<212> PRT
<213> Homo sapiens

<400> 5
Ser Thr Gln Ser Pro Ser Val Phe Pro Leu Thr Arg Cys Cys Lys Asn
1 5 10 15
Ile Pro Ser Asn Ala Thr Ser Val Thr Leu Gly Cys Leu Ala Thr Gly
20 25 30
Tyr Phe Pro Glu Pro Val Met Val Thr Trp Asp Thr Gly Ser Leu Asn
35 40 45
Gly Thr Thr Met Thr Leu Pro Ala Thr Thr Leu Thr Leu Ser Gly His
50 55 60
Tyr Ala Thr Ile Ser Leu Leu Thr Val Ser Gly Ala Trp Ala Lys Gln
65 70 75 80
Met Phe Thr Cys Arg Val Ala His Thr Pro Ser Ser Thr Asp Trp Val
85 90 95
Asp Asn Lys Thr Phe Ser Val Cys Ser Arg Asp Phe Thr Pro Pro Thr
100 105 110
Val Lys Ile Leu Gln Ser Ser Cys Asp Gly Gly Gly His Phe Pro Pro
115 120 125
Thr Ile Gln Leu Leu Cys Leu Val Ser Gly Tyr Thr Pro Gly Thr Ile
130 135 140

Asn	Ile	Thr	Trp	Leu	Glu	Asp	Gly	Gln	Val	Met	Asp	Val	Asp	Leu	Ser
145					150					155					160
Thr	Ala	Ser	Thr	Thr	Gln	Glu	Gly	Glu	Leu	Ala	Ser	Thr	Gln	Ser	Glu
				165					170						175
Leu	Thr	Leu	Ser	Gln	Lys	His	Trp	Leu	Ser	Asp	Arg	Thr	Tyr	Thr	Cys
			180					185					190		
Gln	Val	Thr	Tyr	Gln	Gly	His	Thr	Phe	Glu	Asp	Ser	Thr	Lys	Lys	Cys
		195					200					205			
Ala	Asp	Ser	Asn	Pro	Arg	Gly	Val	Ser	Ala	Tyr	Leu	Ser	Arg	Pro	Ser
	210					215					220				
Pro	Phe	Asp	Leu	Phe	Ile	Arg	Lys	Ser	Pro	Thr	Ile	Thr	Cys	Leu	Val
225					230					235					240
Val	Asp	Leu	Ala	Pro	Ser	Lys	Gly	Thr	Val	Asn	Leu	Thr	Trp	Ser	Arg
				245					250					255	
Ala	Ser	Gly	Lys	Pro	Val	Asn	His	Ser	Thr	Arg	Lys	Glu	Glu	Lys	Gln
			260					265					270		
Arg	Asn	Gly	Thr	Leu	Thr	Val	Thr	Ser	Thr	Leu	Pro	Val	Gly	Thr	Arg
		275					280					285			
Asp	Trp	Ile	Glu	Gly	Glu	Thr	Tyr	Gln	Cys	Arg	Val	Thr	His	Pro	His
	290					295					300				
Leu	Pro	Arg	Ala	Leu	Met	Arg	Ser	Thr	Thr	Lys	Thr	Ser	Gly	Pro	Arg
305					310					315					320
Ala	Ala	Pro	Glu	Val	Tyr	Ala	Phe	Ala	Thr	Pro	Glu	Trp	Pro	Gly	Ser
				325					330					335	
Arg	Asp	Lys	Arg	Thr	Leu	Ala	Cys	Leu	Ile	Gln	Asn	Phe	Met	Pro	Glu
			340					345					350		
Asp	Ile	Ser	Val	Gln	Trp	Leu	His	Asn	Glu	Val	Gln	Leu	Pro	Asp	Ala
		355					360					365			
Arg	His	Ser	Thr	Thr	Gln	Pro	Arg	Lys	Thr	Lys	Gly	Ser	Gly	Phe	Phe
	370					375					380				
Val	Phe	Ser	Arg	Leu	Glu	Val	Thr	Arg	Ala	Glu	Trp	Glu	Gln	Lys	Asp
385					390					395					400
Glu	Phe	Ile	Cys	Arg	Ala	Val	His	Glu	Ala	Ala	Ser	Pro	Ser	Gln	Thr
			405					410						415	
Val	Gln	Arg	Ala	Val	Ser	Val	Asn	Pro	Gly	Lys					
			420					425							

<210> 6
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 6

Phe	Thr	Pro	Pro	Thr	Val	Lys	Ile	Leu	Gln	Ser	Ser	Cys	Asp	Gly	Gly
1				5					10					15	
Gly	His	Phe	Pro	Pro	Thr	Ile	Gln	Leu	Leu	Cys	Leu	Val	Ser	Gly	Tyr
			20					25					30		
Thr	Pro	Gly	Thr	Ile	Asn	Ile	Thr	Trp	Leu	Glu	Asp	Gly	Gln	Val	Met
		35					40					45			
Asp	Val	Asp	Leu	Ser	Thr	Ala	Ser	Thr	Thr	Gln	Glu	Gly	Glu	Leu	Ala
	50					55				60					
Ser	Thr	Gln	Ser	Glu	Leu	Thr	Leu	Ser	Gln	Lys	His	Trp	Leu	Ser	Asp
65					70					75					80
Arg	Thr	Tyr	Thr	Cys	Gln	Val	Thr	Tyr	Gln	Gly	His	Thr	Phe	Glu	Asp
			85						90					95	
Ser	Thr	Lys	Lys	Cys	Ala	Asp	Ser	Asn	Pro	Arg	Gly	Val	Ser	Ala	Tyr
			100					105					110		
Leu	Ser	Arg	Pro	Ser	Pro	Phe	Asp	Leu	Phe	Ile	Arg	Lys	Ser	Pro	Thr
		115					120					125			
Ile	Thr	Cys	Leu	Val	Val	Asp	Leu	Ala	Pro	Ser	Lys	Gly	Thr	Val	Asn

130	135	140
Leu Thr Trp Ser Arg	Ala Ser Gly Lys Pro	Val Asn His Ser Thr Arg
145	150	155
Lys Glu Glu Lys Gln	Arg Asn Gly Thr Leu	Thr Val Thr Ser Thr Leu
165	170	175
Pro Val Gly Thr Arg	Asp Trp Ile Glu Gly	Glu Thr Tyr Gln Cys Arg
180	185	190
Val Thr His Pro His	Leu Pro Arg Ala Leu	Met Arg Ser Thr Thr Lys
195	200	205
Thr Ser Gly Pro Arg	Ala Ala Pro Glu Val	Tyr Ala Phe Ala Thr Pro
210	215	220
Glu Trp Pro Gly Ser	Arg Asp Lys Arg Thr	Leu Ala Cys Leu Ile Gln
225	230	235
Asn Phe Met Pro Glu	Asp Ile Ser Val Gln	Trp Leu His Asn Glu Val
245	250	255
Gln Leu Pro Asp Ala	Arg His Ser Thr Thr	Gln Pro Arg Lys Thr Lys
260	265	270
Gly Ser Gly Phe Phe	Val Phe Ser Arg Leu	Glu Val Thr Arg Ala Glu
275	280	285
Trp Glu Gln Lys Asp	Glu Phe Ile Cys Arg	Ala Val His Glu Ala Ala
290	295	300
Ser Pro Ser Gln Thr	Val Gln Arg Ala Val	Ser Val Asn Pro Gly Lys
305	310	315
		320

<210> 7
 <211> 569
 <212> PRT
 <213> Unknown

<220>
 <223> Fusion between hinge-CH2-CH3 (IgG1) to CH2-CH3-CH4 (IgE)

<400> 7
Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
1 5 10 15
Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
20 25 30
Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
35 40 45
Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
50 55 60
Asp Gly Val Glu Val His Asn Val Lys Thr Lys Pro Arg Glu Glu Gln
65 70 75 80
Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
85 90 95
Asn Trp Met Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
100 105 110
Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Val Gln Pro
115 120 125
Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr
130 135 140
Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
145 150 155 160
Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
165 170 175
Lys Thr Thr Pro Pro Val Leu Asp Ser Val Gly Ser Phe Phe Leu Tyr
180 185 190
Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
195 200 205

Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Gln	Gln	Arg
210						215				220					
Ser	Leu	Ser	Leu	Ser	Pro	Gly	Lys	Val	Glu	Gly	Gly	Gly	Gly	Ser	Gly
225					230					235					240
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Phe	Thr	Pro	Pro	Thr	Val	Lys
				245					250					255	
Ile	Leu	Gln	Ser	Ser	Cys	Asp	Gly	Gly	Gly	His	Phe	Pro	Pro	Thr	Ile
			260					265						270	
Gln	Leu	Leu	Cys	Leu	Val	Ser	Gly	Tyr	Thr	Pro	Gly	Thr	Ile	Asn	Ile
		275					280					285			
Thr	Trp	Leu	Glu	Asp	Gly	Gln	Val	Met	Asp	Val	Asp	Leu	Ser	Thr	Ala
	290					295					300				
Ser	Thr	Thr	Gln	Glu	Gly	Glu	Leu	Ala	Ser	Thr	Gln	Ser	Glu	Leu	Thr
305					310					315					320
Leu	Ser	Gln	Lys	His	Trp	Leu	Ser	Asp	Arg	Thr	Tyr	Thr	Cys	Gln	Val
				325					330					335	
Thr	Tyr	Gln	Gly	His	Thr	Phe	Glu	Asp	Ser	Thr	Lys	Lys	Cys	Ala	Asp
			340					345					350		
Ser	Asn	Pro	Arg	Gly	Val	Ser	Ala	Tyr	Leu	Ser	Arg	Pro	Ser	Pro	Phe
		355					360					365			
Asp	Leu	Phe	Ile	Arg	Lys	Ser	Pro	Thr	Ile	Thr	Cys	Leu	Val	Val	Asp
	370					375					380				
Leu	Ala	Pro	Ser	Lys	Gly	Thr	Val	Asn	Leu	Thr	Trp	Ser	Arg	Ala	Ser
385					390					395					400
Gly	Lys	Pro	Val	Asn	His	Ser	Thr	Arg	Lys	Glu	Glu	Lys	Gln	Arg	Asn
				405					410					415	
Gly	Thr	Leu	Thr	Val	Thr	Ser	Thr	Leu	Pro	Val	Gly	Thr	Arg	Asp	Trp
			420					425					430		
Ile	Glu	Gly	Glu	Thr	Tyr	Gln	Cys	Arg	Val	Thr	His	Pro	His	Leu	Pro
		435					440					445			
Arg	Ala	Leu	Met	Arg	Ser	Thr	Lys	Thr	Ser	Gly	Pro	Arg	Ala	Ala	
	450					455				460					
Pro	Glu	Val	Tyr	Ala	Phe	Ala	Thr	Pro	Glu	Trp	Pro	Gly	Ser	Arg	Asp
465					470					475					480
Lys	Arg	Thr	Leu	Ala	Cys	Leu	Ile	Gln	Asn	Phe	Met	Pro	Glu	Asp	Ile
				485					490					495	
Ser	Val	Gln	Trp	Leu	His	Asn	Glu	Val	Gln	Leu	Pro	Asp	Ala	Arg	His
			500					505					510		
Ser	Thr	Thr	Gln	Pro	Arg	Lys	Thr	Lys	Gly	Ser	Gly	Phe	Phe	Val	Phe
		515					520					525			
Ser	Arg	Leu	Glu	Val	Thr	Arg	Ala	Glu	Trp	Glu	Gln	Lys	Asp	Glu	Phe
		530				535					540				
Ile	Cys	Arg	Ala	Val	His	Glu	Ala	Ala	Ser	Pro	Ser	Gln	Thr	Val	Gln
545					550					555					560
Arg	Ala	Val	Ser	Val	Asn	Pro	Gly	Lys							
				565											

<210> 8
 <211> 159
 <212> PRT
 <213> Alnus glutinosa (Alder)

<220>

<400> 8
 Gly Val Phe Asn Tyr Glu Ala Glu Thr Pro Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asp Lys Leu Leu Pro Lys
 20 25 30
 Val Ala Pro Glu Ala Val Ser Ser Val Glu Asn Ile Glu Gly Asn Gly

		35					40					45					
Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Thr	Phe	Pro	Glu	Gly	Ser	Pro	Phe		
	50					55					60						
Lys	Tyr	Val	Lys	Glu	Arg	Val	Asp	Glu	Val	Asp	Arg	Val	Asn	Phe	Lys		
65					70					75					80		
Tyr	Ser	Phe	Ser	Val	Ile	Glu	Gly	Gly	Ala	Val	Gly	Asp	Ala	Leu	Glu		
				85					90					95			
Lys	Val	Cys	Asn	Glu	Ile	Lys	Ile	Val	Ala	Ala	Pro	Asp	Gly	Gly	Ser		
			100					105					110				
Ile	Leu	Lys	Ile	Ser	Asn	Lys	Phe	His	Thr	Lys	Gly	Asp	His	Glu	Ile		
		115					120					125					
Asn	Ala	Glu	Gln	Ile	Lys	Ile	Glu	Lys	Glu	Lys	Ala	Val	Gly	Leu	Leu		
	130					135					140						
Lys	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Ser	Asp	Ala	Tyr	Asn			
145					150					155							

<210> 9
 <211> 113
 <212> PRT
 <213> Alternaria alternata

<400> 9

Met	Lys	His	Leu	Ala	Ala	Tyr	Leu	Leu	Leu	Gly	Leu	Gly	Gly	Asn	Thr		
1				5					10					15			
Ser	Pro	Ser	Ala	Ala	Asp	Val	Lys	Ala	Val	Leu	Glu	Ser	Val	Gly	Ile		
			20					25					30				
Glu	Ala	Asp	Ser	Asp	Arg	Leu	Asp	Lys	Leu	Ile	Ser	Glu	Leu	Glu	Gly		
		35					40					45					
Lys	Asp	Ile	Asn	Glu	Leu	Ile	Ala	Ser	Gly	Ser	Glu	Lys	Leu	Ala	Ser		
	50					55					60						
Val	Pro	Ser	Gly	Gly	Ala	Gly	Gly	Ala	Ala	Ala	Ser	Gly	Gly	Ala	Ala		
65					70					75					80		
Ala	Ala	Gly	Gly	Ser	Ala	Gln	Ala	Glu	Ala	Ala	Pro	Glu	Ala	Ala	Lys		
				85					90					95			
Glu	Glu	Glu	Lys	Glu	Glu	Ser	Asp	Glu	Asp	Met	Gly	Phe	Gly	Leu	Phe		
			100					105					110				

Asp

<210> 10
 <211> 204
 <212> PRT
 <213> Alternaria alternata

<400> 10

Met	Ala	Pro	Lys	Ile	Ala	Ile	Val	Tyr	Tyr	Ser	Met	Tyr	Gly	His	Ile		
1				5					10					15			
Lys	Lys	Met	Ala	Asp	Ala	Glu	Leu	Lys	Gly	Ile	Gln	Glu	Ala	Gly	Gly		
			20					25					30				
Asp	Ala	Lys	Leu	Phe	Gln	Val	Ala	Glu	Thr	Leu	Pro	Gln	Glu	Val	Leu		
		35					40					45					
Asp	Lys	Met	Tyr	Ala	Pro	Pro	Lys	Asp	Ser	Ser	Val	Pro	Val	Leu	Glu		
	50					55					60						
Asp	Pro	Ala	Val	Leu	Glu	Phe	Asp	Gly	Ile	Leu	Phe	Gly	Ile	Pro			
65					70					75				80			
Thr	Arg	Tyr	Gly	Asn	Phe	Pro	Ala	Gln	Phe	Lys	Thr	Phe	Trp	Asp	Lys		
				85					90					95			
Thr	Gly	Lys	Gln	Trp	Gln	Gln	Gly	Ala	Phe	Trp	Gly	Lys	Tyr	Ala	Gly		
			100					105					110				

Val	Phe	Val	Ser	Thr	Gly	Thr	Leu	Gly	Gly	Gly	Gln	Glu	Thr	Thr	Ala
		115					120					125			
Ile	Thr	Ser	Met	Ser	Thr	Leu	Val	Asp	His	Gly	Phe	Ile	Tyr	Val	Pro
	130					135					140				
Leu	Gly	Tyr	Lys	Thr	Ala	Phe	Ser	Met	Leu	Ala	Asn	Leu	Asp	Glu	Val
145					150					155					160
His	Gly	Gly	Ser	Pro	Trp	Gly	Ala	Gly	Thr	Phe	Ser	Ala	Gly	Asp	Gly
			165						170					175	
Ser	Arg	Gln	Pro	Ser	Glu	Leu	Glu	Leu	Asn	Ile	Ala	Gln	Ala	Gln	Gly
		180					185					190			
Lys	Ala	Phe	Tyr	Glu	Ala	Val	Ala	Lys	Ala	His	Gln				
		195					200								

<210> 11

<211> 495

<212> PRT

<213> Alternaria alternata

<400> 11

Met	Thr	Ser	Val	Lys	Leu	Ser	Thr	Pro	Gln	Thr	Gly	Glu	Phe	Glu	Gln
1				5					10					15	
Pro	Thr	Gly	Leu	Phe	Ile	Asn	Asn	Glu	Phe	Val	Lys	Ala	Val	Asp	Gly
			20					25					30		
Lys	Thr	Phe	Asp	Val	Ile	Asn	Pro	Ser	Thr	Glu	Glu	Val	Ile	Cys	Ser
		35					40					45			
Val	Gln	Glu	Ala	Thr	Glu	Lys	Asp	Val	Asp	Ile	Ala	Val	Ala	Ala	Ala
	50					55					60				
Arg	Lys	Ala	Phe	Asn	Gly	Pro	Trp	Ala	Lys	Glu	Thr	Pro	Glu	Asn	Arg
65					70					75					80
Gly	Lys	Leu	Leu	Asn	Lys	Leu	Ala	Asp	Leu	Phe	Glu	Lys	Asn	Ala	Asp
				85					90					95	
Leu	Ile	Ala	Ala	Val	Glu	Ala	Leu	Asp	Asn	Gly	Lys	Ala	Phe	Ser	Met
			100					105					110		
Ala	Lys	Asn	Val	Asp	Val	Pro	Ala	Ala	Ala	Gly	Cys	Leu	Arg	Tyr	Tyr
		115					120					125			
Gly	Gly	Trp	Ala	Asp	Lys	Ile	Glu	Gly	Lys	Val	Val	Asp	Thr	Ala	Pro
	130					135					140				
Asp	Ser	Phe	Asn	Tyr	Ile	Arg	Lys	Ser	Leu	Leu	Val	Phe	Ala	Val	Arg
145					150					155					160
Ser	Ser	Met	Glu	Leu	Pro	Ile	Leu	Met	Trp	Ser	Trp	Lys	Ile	Gly	Pro
			165						170					175	
Ala	Ile	Ala	Thr	Gly	Asn	Thr	Val	Val	Leu	Lys	Thr	Ala	Glu	Gln	Thr
			180					185					190		
Pro	Leu	Ser	Ala	Tyr	Ile	Ala	Cys	Lys	Leu	Ile	Gln	Glu	Ala	Gly	Phe
		195					200					205			
Pro	Pro	Gly	Val	Ile	Asn	Val	Ile	Thr	Gly	Phe	Gly	Lys	Ile	Ala	Gly
	210					215					220				
Ala	Ala	Met	Ser	Ala	His	Met	Asp	Ile	Asp	Lys	Ile	Ala	Phe	Thr	Gly
225					230					235					240
Ser	Thr	Val	Val	Gly	Arg	Gln	Ile	Met	Lys	Ser	Ala	Ala	Gly	Ser	Asn
				245					250					255	
Leu	Lys	Lys	Val	Thr	Leu	Glu	Leu	Gly	Gly	Lys	Ser	Pro	Asn	Ile	Val
			260					265					270		
Phe	Ala	Asp	Ala	Asp	Leu	Asp	Glu	Ala	Ile	His	Trp	Val	Asn	Phe	Gly
		275					280					285			
Ile	Tyr	Phe	Asn	His	Gly	Gln	Ala	Cys	Cys	Ala	Gly	Ser	Arg	Ile	Tyr
	290					295					300				
Val	Gln	Glu	Glu	Ile	Tyr	Asp	Lys	Phe	Ile	Gln	Arg	Phe	Lys	Glu	Arg
305					310					315					320
Ala	Ala	Gln	Asn	Ala	Val	Gly	Asp	Pro	Phe	Ala	Ala	Thr	Leu	Gln	Gly

Pro	Gln	Val	Ser	Gln	Leu	Gln	Phe	Asp	Arg	Ile	Met	Gly	Tyr	Ile	Glu
			340					345					350		
Glu	Gly	Lys	Lys	Ser	Gly	Ala	Thr	Ile	Glu	Thr	Gly	Gly	Asn	Arg	Lys
		355					360					365			
Gly	Asp	Lys	Gly	Tyr	Phe	Ile	Glu	Pro	Thr	Ile	Phe	Ser	Asn	Val	Thr
	370					375					380				
Glu	Asp	Met	Lys	Ile	Gln	Gln	Glu	Glu	Ile	Phe	Gly	Pro	Val	Cys	Thr
385					390					395					400
Ile	Ser	Lys	Phe	Lys	Thr	Lys	Ala	Asp	Val	Ile	Lys	Ile	Gly	Asn	Asn
			405					410						415	
Thr	Thr	Tyr	Gly	Leu	Ser	Ala	Ala	Val	His	Thr	Ser	Asn	Leu	Thr	Thr
			420					425					430		
Ala	Ile	Glu	Val	Ala	Asn	Ala	Leu	Arg	Ala	Gly	Thr	Val	Trp	Val	Asn
		435					440					445			
Ser	Tyr	Asn	Thr	Leu	His	Trp	Gln	Leu	Pro	Phe	Gly	Gly	Tyr	Lys	Glu
	450					455					460				
Ser	Gly	Ile	Gly	Arg	Glu	Leu	Gly	Glu	Ala	Ala	Leu	Asp	Asn	Tyr	Ile
465					470				475						480
Gln	Thr	Lys	Thr	Val	Ser	Ile	Arg	Leu	Gly	Asp	Val	Leu	Phe	Gly	
				485					490					495	

<210> 12
 <211> 110
 <212> PRT
 <213> *Alternaria alternata*

Met	Ser	Thr	Ser	Glu	Leu	Ala	Thr	Ser	Tyr	Ala	Ala	Leu	Ile	Leu	Ala
1				5				10					15		
Asp	Asp	Gly	Val	Asp	Ile	Thr	Ala	Asp	Lys	Leu	Gln	Ser	Leu	Ile	Lys
			20					25					30		
Ala	Ala	Lys	Ile	Glu	Glu	Val	Glu	Pro	Ile	Trp	Thr	Thr	Leu	Phe	Ala
		35					40					45			
Lys	Ala	Leu	Glu	Gly	Lys	Asp	Val	Lys	Asp	Leu	Leu	Leu	Asn	Val	Gly
	50					55				60					
Ser	Gly	Gly	Gly	Ala	Ala	Pro	Leu	Pro	Glu	Ala	Leu	Leu	Leu	Arg	Trp
65				70					75					80	
Arg	Ala	Ala	Asp	Ala	Ala	Pro	Ala	Ala	Glu	Lys	Lys	Glu	Glu	Glu	
				85				90					95		
Lys	Glu	Glu	Ser	Asp	Glu	Asp	Met	Gly	Phe	Gly	Leu	Phe	Asp		
			100					105					110		

<210> 13
 <211> 396
 <212> PRT
 <213> *Ambrosia artemisiifolia* (Short ragweed)

Met	Gly	Ile	Lys	His	Cys	Cys	Tyr	Ile	Leu	Tyr	Phe	Thr	Leu	Ala	Leu
1				5				10					15		
Val	Thr	Leu	Leu	Gln	Pro	Val	Arg	Ser	Ala	Glu	Asp	Leu	Gln	Glu	Ile
			20					25					30		
Leu	Pro	Val	Asn	Glu	Thr	Arg	Arg	Leu	Thr	Thr	Ser	Gly	Ala	Tyr	Asn
		35					40					45			
Ile	Ile	Asp	Gly	Cys	Trp	Arg	Gly	Lys	Ala	Asp	Trp	Ala	Glu	Asn	Arg
	50					55				60					
Lys	Ala	Leu	Ala	Asp	Cys	Ala	Gln	Gly	Phe	Gly	Lys	Gly	Thr	Val	Gly
65					70				75						80

Gly	Lys	Asp	Gly	Asp	Ile	Tyr	Thr	Val	Thr	Ser	Glu	Leu	Asp	Asp	Asp	
				85					90					95		
Val	Ala	Asn	Pro	Lys	Glu	Gly	Thr	Leu	Arg	Phe	Gly	Ala	Ala	Gln	Asn	
			100					105					110			
Arg	Pro	Leu	Trp	Ile	Ile	Phe	Glu	Arg	Asp	Met	Val	Ile	Arg	Leu	Asp	
		115					120					125				
Lys	Glu	Met	Val	Val	Asn	Ser	Asp	Lys	Thr	Ile	Asp	Gly	Arg	Gly	Ala	
	130						135				140					
Lys	Val	Glu	Ile	Ile	Asn	Ala	Gly	Phe	Thr	Leu	Asn	Gly	Val	Lys	Asn	
145					150					155					160	
Val	Ile	Ile	His	Asn	Ile	Asn	Met	His	Asp	Val	Lys	Val	Asn	Pro	Gly	
				165					170					175		
Gly	Leu	Ile	Lys	Ser	Asn	Asp	Gly	Pro	Ala	Ala	Pro	Arg	Ala	Gly	Ser	
			180					185					190			
Asp	Gly	Asp	Ala	Ile	Ser	Ile	Ser	Gly	Ser	Ser	Gln	Ile	Trp	Ile	Asp	
		195					200					205				
His	Cys	Ser	Leu	Ser	Lys	Ser	Val	Asp	Gly	Leu	Val	Asp	Ala	Lys	Leu	
	210					215					220					
Gly	Thr	Thr	Arg	Leu	Thr	Val	Ser	Asn	Ser	Leu	Phe	Thr	Gln	His	Gln	
225					230					235					240	
Phe	Val	Leu	Leu	Phe	Gly	Ala	Gly	Asp	Glu	Asn	Ile	Glu	Asp	Arg	Gly	
				245					250					255		
Met	Leu	Ala	Thr	Val	Ala	Phe	Asn	Thr	Phe	Thr	Asp	Asn	Val	Asp	Gln	
			260					265					270			
Arg	Met	Pro	Arg	Cys	Arg	His	Gly	Phe	Phe	Gln	Val	Val	Asn	Asn	Asn	
		275					280					285				
Tyr	Asp	Lys	Trp	Gly	Ser	Tyr	Ala	Ile	Gly	Gly	Ser	Ala	Ser	Pro	Thr	
	290					295					300					
Ile	Leu	Ser	Gln	Gly	Asn	Arg	Phe	Cys	Ala	Pro	Asp	Glu	Arg	Ser	Lys	
305					310					315					320	
Lys	Asn	Val	Leu	Gly	Arg	His	Gly	Glu	Ala	Ala	Ala	Glu	Ser	Met	Lys	
				325					330					335		
Trp	Asn	Trp	Arg	Thr	Asn	Lys	Asp	Val	Leu	Glu	Asn	Gly	Ala	Ile	Phe	
			340					345					350			
Val	Ala	Ser	Gly	Val	Asp	Pro	Val	Leu	Thr	Pro	Glu	Gln	Ser	Ala	Gly	
			355				360					365				
Met	Ile	Pro	Ala	Glu	Pro	Gly	Glu	Ser	Ala	Leu	Ser	Leu	Thr	Ser	Ser	
	370					375					380					
Ala	Gly	Val	Leu	Ser	Cys	Gln	Pro	Gly	Ala	Pro	Cys					
385					390					395						

<210> 14
 <211> 398
 <212> PRT
 <213> Ambrosia artemisiifolia (Short ragweed)

<400> 14

Met	Gly	Ile	Lys	His	Cys	Cys	Tyr	Ile	Leu	Tyr	Phe	Thr	Leu	Ala	Leu	
1				5					10					15		
Val	Thr	Leu	Leu	Gln	Pro	Val	Arg	Ser	Ala	Glu	Asp	Val	Glu	Glu	Phe	
		20						25					30			
Leu	Pro	Ser	Ala	Asn	Glu	Thr	Arg	Arg	Ser	Leu	Lys	Ala	Cys	Glu	Ala	
		35					40					45				
His	Asn	Ile	Ile	Asp	Lys	Cys	Trp	Arg	Cys	Lys	Ala	Asp	Trp	Ala	Asn	
	50					55					60					
Asn	Arg	Gln	Ala	Leu	Ala	Asp	Cys	Ala	Gln	Gly	Phe	Ala	Lys	Gly	Thr	
65					70					75					80	
Tyr	Gly	Gly	Lys	His	Gly	Asp	Val	Tyr	Thr	Val	Thr	Ser	Asp	Lys	Asp	
				85					90					95		
Asp	Asp	Val	Ala	Asn	Pro	Lys	Glu	Gly	Thr	Leu	Arg	Phe	Ala	Ala	Ala	

			100					105					110			
Gln	Asn	Arg	Pro	Leu	Trp	Ile	Ile	Phe	Lys	Arg	Asn	Met	Val	Ile	His	
			115					120				125				
Leu	Asn	Gln	Glu	Leu	Val	Val	Asn	Ser	Asp	Lys	Thr	Ile	Asp	Gly	Arg	
			130					135				140				
Gly	Val	Lys	Val	Asn	Ile	Val	Asn	Ala	Gly	Leu	Thr	Leu	Met	Asn	Val	
145					150					155					160	
Lys	Asn	Ile	Ile	Ile	His	Asn	Ile	Asn	Ile	His	Asp	Ile	Lys	Val	Cys	
				165					170					175		
Pro	Gly	Gly	Met	Ile	Lys	Ser	Asn	Asp	Gly	Pro	Pro	Ile	Leu	Arg	Gln	
			180					185					190			
Gln	Ser	Asp	Gly	Asp	Ala	Ile	Asn	Val	Ala	Gly	Ser	Ser	Gln	Ile	Trp	
		195					200					205				
Ile	Asp	His	Cys	Ser	Leu	Ser	Lys	Ala	Ser	Asp	Gly	Leu	Leu	Asp	Ile	
	210					215					220					
Thr	Leu	Gly	Ser	Ser	His	Val	Thr	Val	Ser	Asn	Cys	Lys	Phe	Thr	Gln	
225					230					235					240	
His	Gln	Phe	Val	Leu	Leu	Leu	Gly	Ala	Asp	Asp	Thr	His	Tyr	Gln	Asp	
			245					250						255		
Lys	Gly	Met	Leu	Ala	Thr	Val	Ala	Phe	Asn	Met	Phe	Thr	Asp	His	Val	
			260					265					270			
Asp	Gln	Arg	Met	Pro	Arg	Cys	Arg	Phe	Gly	Phe	Phe	Gln	Val	Val	Asn	
		275					280					285				
Asn	Asn	Tyr	Asp	Arg	Trp	Gly	Thr	Tyr	Ala	Ile	Gly	Gly	Ser	Ser	Ala	
	290					295					300					
Pro	Thr	Ile	Leu	Ser	Gln	Gly	Asn	Arg	Phe	Phe	Ala	Pro	Asp	Asp	Ile	
305					310					315					320	
Ile	Lys	Lys	Asn	Val	Leu	Ala	Arg	Thr	Gly	Thr	Gly	Asn	Ala	Glu	Ser	
			325						330					335		
Met	Ser	Trp	Asn	Trp	Arg	Thr	Asp	Arg	Asp	Leu	Leu	Glu	Asn	Gly	Ala	
			340					345					350			
Ile	Phe	Leu	Pro	Ser	Gly	Ser	Asp	Pro	Val	Leu	Thr	Pro	Glu	Gln	Lys	
		355					360					365				
Ala	Gly	Met	Ile	Pro	Ala	Glu	Pro	Gly	Glu	Ala	Val	Leu	Arg	Leu	Thr	
	370					375				380						
Ser	Ser	Ala	Gly	Val	Leu	Ser	Cys	His	Gln	Gly	Ala	Pro	Cys			
385					390					395						

<210> 15

<211> 397

<212> PRT

<213> Ambrosia artemisiifolia (Short ragweed)

<400> 15

Met	Gly	Ile	Lys	Gln	Cys	Cys	Tyr	Ile	Leu	Tyr	Phe	Thr	Leu	Ala	Leu	
1				5					10					15		
Val	Ala	Leu	Leu	Gln	Pro	Val	Arg	Ser	Ala	Glu	Gly	Val	Gly	Glu	Ile	
			20					25					30			
Leu	Pro	Ser	Val	Asn	Glu	Thr	Arg	Ser	Leu	Gln	Ala	Cys	Glu	Ala	Leu	
		35					40					45				
Asn	Ile	Ile	Asp	Lys	Cys	Trp	Arg	Gly	Lys	Ala	Asp	Trp	Glu	Asn	Asn	
	50					55					60					
Arg	Gln	Ala	Leu	Ala	Asp	Cys	Ala	Gln	Gly	Phe	Ala	Lys	Gly	Thr	Tyr	
65					70					75					80	
Gly	Gly	Lys	Trp	Gly	Asp	Val	Tyr	Thr	Val	Thr	Ser	Asn	Leu	Asp	Asp	
				85					90					95		
Asp	Val	Ala	Asn	Pro	Lys	Glu	Gly	Thr	Leu	Arg	Phe	Ala	Ala	Ala	Gln	
			100					105					110			
Asn	Arg	Pro	Leu	Trp	Ile	Ile	Phe	Lys	Asn	Asp	Met	Val	Ile	Asn	Leu	
		115					120						125			

BL
Cont.

Asn	Gln	Glu	Leu	Val	Val	Asn	Ser	Asp	Lys	Thr	Ile	Asp	Gly	Arg	Gly
130						135					140				
Val	Lys	Val	Glu	Ile	Ile	Asn	Gly	Gly	Leu	Thr	Leu	Met	Asn	Val	Lys
145						150					155				160
Asn	Ile	Ile	Ile	His	Asn	Ile	Asn	Ile	His	Asp	Val	Lys	Val	Leu	Pro
				165					170						175
Gly	Gly	Met	Ile	Lys	Ser	Asn	Asp	Gly	Pro	Pro	Ile	Leu	Arg	Gln	Ala
			180					185					190		
Ser	Asp	Gly	Asp	Thr	Ile	Asn	Val	Ala	Gly	Ser	Ser	Gln	Ile	Trp	Ile
		195					200					205			
Asp	His	Cys	Ser	Leu	Ser	Lys	Ser	Phe	Asp	Gly	Leu	Val	Asp	Val	Thr
	210					215					220				
Leu	Gly	Ser	Thr	His	Val	Thr	Ile	Ser	Asn	Cys	Lys	Phe	Thr	Gln	Gln
225					230					235					240
Ser	Lys	Ala	Ile	Leu	Leu	Gly	Ala	Asp	Asp	Thr	His	Val	Gln	Asp	Lys
				245				250						255	
Gly	Met	Leu	Ala	Thr	Val	Ala	Phe	Asn	Met	Phe	Thr	Asp	Asn	Val	Asp
			260					265					270		
Gln	Arg	Met	Pro	Arg	Cys	Arg	Phe	Gly	Phe	Phe	Gln	Val	Val	Asn	Asn
		275					280					285			
Asn	Tyr	Asp	Arg	Trp	Gly	Thr	Tyr	Ala	Ile	Gly	Gly	Ser	Ser	Ala	Pro
	290					295					300				
Thr	Ile	Leu	Cys	Gln	Gly	Asn	Arg	Phe	Leu	Ala	Pro	Asp	Asp	Gln	Ile
305					310					315					320
Lys	Lys	Asn	Val	Leu	Ala	Arg	Thr	Gly	Thr	Gly	Ala	Ala	Glu	Ser	Met
				325					330					335	
Ala	Trp	Asn	Trp	Arg	Ser	Asp	Lys	Asp	Leu	Leu	Glu	Asn	Gly	Ala	Ile
			340					345					350		
Phe	Val	Thr	Ser	Gly	Ser	Asp	Pro	Val	Leu	Thr	Pro	Val	Gln	Ser	Ala
		355					360					365			
Gly	Met	Ile	Pro	Ala	Glu	Pro	Gly	Glu	Ala	Ala	Ile	Lys	Leu	Thr	Ser
	370					375					380				
Ser	Ala	Gly	Val	Phe	Ser	Cys	His	Pro	Gly	Ala	Pro	Cys			
385					390					395					

<210> 16
 <211> 392
 <212> PRT
 <213> Ambrosia artemisiifolia (Short ragweed)

<400> 16

Met	Gly	Ile	Lys	His	Cys	Cys	Tyr	Ile	Leu	Tyr	Phe	Thr	Leu	Ala	Leu
1				5					10					15	
Val	Thr	Leu	Leu	Gln	Pro	Val	Arg	Ser	Ala	Glu	Asp	Leu	Gln	Gln	Ile
			20					25					30		
Leu	Pro	Ser	Ala	Asn	Glu	Thr	Arg	Ser	Leu	Thr	Thr	Cys	Gly	Thr	Tyr
		35					40					45			
Asn	Ile	Ile	Asp	Gly	Cys	Trp	Arg	Gly	Lys	Ala	Asp	Trp	Ala	Glu	Asn
	50					55					60				
Arg	Lys	Ala	Leu	Ala	Asp	Cys	Ala	Gln	Gly	Phe	Ala	Lys	Gly	Thr	Ile
65					70					75					80
Gly	Gly	Lys	Asp	Gly	Asp	Ile	Tyr	Thr	Val	Thr	Ser	Glu	Leu	Asp	Asp
				85					90					95	
Asp	Val	Ala	Asn	Pro	Lys	Glu	Gly	Thr	Leu	Arg	Phe	Gly	Ala	Ala	Gln
			100					105					110		
Asn	Arg	Pro	Leu	Trp	Ile	Ile	Phe	Ala	Arg	Asp	Met	Val	Ile	Arg	Leu
		115					120					125			
Asp	Arg	Glu	Leu	Ala	Ile	Asn	Asn	Asp	Lys	Thr	Ile	Asp	Gly	Arg	Gly
	130					135					140				
Ala	Lys	Val	Glu	Ile	Ile	Asn	Ala	Gly	Phe	Ala	Ile	Tyr	Asn	Val	Lys

145					150					155					160
Asn	Ile	Ile	Ile	His	Asn	Ile	Ile	Met	His	Asp	Ile	Val	Val	Asn	Pro
				165					170					175	
Gly	Gly	Leu	Ile	Lys	Ser	His	Asp	Gly	Pro	Pro	Val	Pro	Arg	Lys	Gly
			180					185					190		
Ser	Asp	Gly	Asp	Ala	Ile	Gly	Ile	Ser	Gly	Gly	Ser	Gln	Ile	Trp	Ile
	195						200					205			
Asp	His	Cys	Ser	Leu	Ser	Lys	Ala	Val	Asp	Gly	Leu	Ile	Asp	Ala	Lys
	210					215					220				
His	Gly	Ser	Thr	His	Phe	Thr	Val	Ser	Asn	Cys	Leu	Phe	Thr	Gln	His
225					230					235				240	
Gln	Tyr	Leu	Leu	Leu	Phe	Trp	Asp	Phe	Asp	Glu	Arg	Gly	Met	Leu	Cys
				245					250					255	
Thr	Val	Ala	Phe	Asn	Lys	Phe	Thr	Asp	Asn	Val	Asp	Gln	Arg	Met	Pro
			260					265					270		
Asn	Leu	Arg	His	Gly	Phe	Val	Gln	Val	Val	Asn	Asn	Asn	Tyr	Glu	Arg
		275					280					285			
Trp	Gly	Ser	Tyr	Ala	Leu	Gly	Gly	Ser	Ala	Gly	Pro	Thr	Ile	Leu	Ser
	290					295					300				
Gln	Gly	Asn	Arg	Phe	Leu	Ala	Ser	Asp	Ile	Lys	Lys	Glu	Val	Val	Gly
305					310					315					320
Arg	Tyr	Gly	Glu	Ser	Ala	Met	Ser	Glu	Ser	Ile	Asn	Trp	Asn	Trp	Arg
				325					330					335	
Ser	Tyr	Met	Asp	Val	Phe	Glu	Asn	Gly	Ala	Ile	Phe	Val	Pro	Ser	Gly
			340					345					350		
Val	Asp	Pro	Val	Leu	Thr	Pro	Glu	Gln	Asn	Ala	Gly	Met	Ile	Pro	Ala
		355					360					365			
Glu	Pro	Gly	Glu	Ala	Val	Leu	Arg	Leu	Thr	Ser	Ser	Ala	Gly	Val	Leu
	370					375					380				
Ser	Cys	Gln	Pro	Gly	Ala	Pro	Cys								
385					390										

<210> 17
 <211> 397
 <212> PRT
 <213> *Ambrosia artemisiifolia* (Short ragweed)

<400> 17															
Met	Gly	Ile	Lys	His	Cys	Cys	Tyr	Ile	Leu	Tyr	Phe	Thr	Leu	Ala	Leu
1				5					10					15	
Val	Thr	Leu	Val	Gln	Ala	Gly	Arg	Leu	Gly	Glu	Glu	Val	Asp	Ile	Leu
			20					25					30		
Pro	Ser	Pro	Asn	Asp	Thr	Arg	Arg	Ser	Leu	Gln	Gly	Cys	Glu	Ala	His
			35			40						45			
Asn	Ile	Ile	Asp	Lys	Cys	Trp	Arg	Cys	Lys	Pro	Asp	Trp	Ala	Glu	Asn
	50					55					60				
Arg	Gln	Ala	Leu	Gly	Asn	Cys	Ala	Gln	Gly	Phe	Gly	Lys	Ala	Thr	His
65					70					75				80	
Gly	Gly	Lys	Trp	Gly	Asp	Ile	Tyr	Met	Val	Thr	Ser	Asp	Gln	Asp	Asp
				85					90					95	
Asp	Val	Val	Asn	Pro	Lys	Glu	Gly	Thr	Leu	Arg	Phe	Gly	Ala	Thr	Gln
			100					105					110		
Asp	Arg	Pro	Leu	Trp	Ile	Ile	Phe	Gln	Arg	Asp	Met	Ile	Ile	Tyr	Leu
		115					120					125			
Gln	Gln	Glu	Met	Val	Val	Thr	Ser	Asp	Lys	Thr	Ile	Asp	Gly	Arg	Gly
	130					135						140			
Ala	Lys	Val	Glu	Leu	Val	Tyr	Gly	Gly	Ile	Thr	Leu	Met	Asn	Val	Lys
145					150					155					160
Asn	Val	Ile	Ile	His	Asn	Ile	Asp	Ile	His	Asp	Val	Arg	Val	Leu	Pro
				165					170					175	

Gly	Gly	Arg	Ile	Lys	Ser	Asn	Gly	Gly	Pro	Ala	Ile	Pro	Arg	His	Gln	
			180					185					190			
Ser	Asp	Gly	Asp	Ala	Ile	His	Val	Thr	Gly	Ser	Ser	Asp	Ile	Trp	Ile	
		195					200					205				
Asp	His	Cys	Thr	Leu	Ser	Lys	Ser	Phe	Asp	Gly	Leu	Val	Asp	Val	Asn	
	210					215					220					
Trp	Gly	Ser	Thr	Gly	Val	Thr	Ile	Ser	Asn	Cys	Lys	Phe	Thr	His	His	
	225				230					235					240	
Glu	Lys	Ala	Val	Leu	Leu	Gly	Ala	Ser	Asp	Thr	His	Phe	Gln	Asp	Leu	
			245						250					255		
Lys	Met	His	Val	Thr	Leu	Ala	Tyr	Asn	Ile	Phe	Thr	Asn	Thr	Val	His	
			260					265					270			
Glu	Arg	Met	Pro	Arg	Cys	Arg	Phe	Gly	Phe	Phe	Gln	Ile	Val	Asn	Asn	
	275						280					285				
Phe	Tyr	Asp	Arg	Trp	Asp	Lys	Tyr	Ala	Ile	Gly	Gly	Ser	Ser	Asn	Pro	
	290					295					300					
Thr	Ile	Leu	Ser	Gln	Gly	Asn	Lys	Phe	Val	Ala	Pro	Asp	Phe	Ile	Tyr	
	305				310					315					320	
Lys	Lys	Asn	Val	Cys	Leu	Arg	Thr	Gly	Ala	Gln	Glu	Pro	Glu	Trp	Met	
			325						330					335		
Thr	Trp	Asn	Trp	Arg	Thr	Gln	Asn	Asp	Val	Leu	Glu	Asn	Gly	Ala	Ile	
		340						345					350			
Phe	Val	Ala	Ser	Gly	Ser	Asp	Pro	Val	Leu	Thr	Ala	Glu	Gln	Asn	Ala	
	355						360					365				
Gly	Met	Met	Gln	Ala	Glu	Pro	Gly	Asp	Met	Val	Pro	Gln	Leu	Thr	Met	
	370					375					380					
Asn	Ala	Gly	Val	Leu	Thr	Cys	Ser	Pro	Gly	Ala	Pro	Cys				
	385				390					395						

<210> 18

<211> 101

<212> PRT

<213> Ambrosia artemisiifolia var.elatior(Short ragweed)

<400> 18

Gly	Lys	Val	Tyr	Leu	Val	Gly	Gly	Pro	Glu	Leu	Gly	Gly	Trp	Lys	Leu	
1				5					10					15		
Gln	Ser	Asp	Pro	Arg	Ala	Tyr	Ala	Leu	Trp	Ser	Ala	Arg	Gln	Gln	Phe	
			20					25					30			
Lys	Thr	Thr	Asp	Val	Leu	Trp	Phe	Asn	Phe	Thr	Thr	Gly	Glu	Asp	Ser	
		35					40					45				
Val	Ala	Glu	Val	Trp	Arg	Glu	Glu	Ala	Tyr	His	Ala	Cys	Asp	Ile	Lys	
	50					55					60					
Asp	Pro	Ile	Arg	Leu	Glu	Pro	Gly	Gly	Pro	Asp	Arg	Phe	Thr	Leu	Leu	
	65				70					75					80	
Thr	Pro	Gly	Ser	His	Phe	Ile	Cys	Thr	Lys	Asp	Gln	Lys	Phe	Val	Ala	
				85					90					95		
Cys	Val	Pro	Gly	Arg												
			100													

<210> 19

<211> 45

<212> PRT

<213> Ambrosia artemisiifolia var.elatior(Short ragweed)

<400> 19

Leu	Val	Pro	Cys	Ala	Trp	Ala	Gly	Asn	Val	Cys	Gly	Glu	Lys	Arg	Ala	
1				5					10					15		
Tyr	Cys	Cys	Ser	Asp	Pro	Gly	Arg	Tyr	Cys	Pro	Trp	Gln	Val	Val	Cys	

			20					25					30
Tyr	Glu	Ser	Ser	Glu	Ile	Cys	Ser	Lys	Lys	Cys	Gly	Lys	
			35				40					45	

<210> 20
 <211> 77
 <212> PRT
 <213> Ambrosia psilostachya (Western ragweed)

<400> 20

Met	Asn	Asn	Glu	Lys	Asn	Val	Ser	Phe	Glu	Phe	Ile	Gly	Ser	Thr	Asp
1				5					10					15	
Glu	Val	Asp	Glu	Ile	Lys	Leu	Leu	Pro	Cys	Ala	Trp	Ala	Gly	Asn	Val
			20					25					30		
Cys	Gly	Glu	Lys	Arg	Ala	Tyr	Cys	Cys	Ser	Asp	Pro	Gly	Arg	Tyr	Cys
		35					40					45			
Pro	Trp	Gln	Val	Val	Cys	Tyr	Glu	Ser	Ser	Glu	Ile	Cys	Ser	Gln	Lys
	50					55					60				
Cys	Gly	Lys	Met	Arg	Met	Asn	Val	Thr	Lys	Asn	Thr	Ile			
65					70					75					

<210> 21
 <211> 77
 <212> PRT
 <213> Ambrosia psilostachya (Western ragweed)

<400> 21

Met	Asn	Asn	Glu	Lys	Asn	Val	Ser	Phe	Glu	Phe	Ile	Gly	Ser	Thr	Asn
1				5					10					15	
Glu	Val	Asp	Glu	Ile	Lys	Val	Met	Ala	Cys	Tyr	Ala	Ala	Gly	Ser	Ile
			20					25					30		
Cys	Gly	Glu	Lys	Arg	Gly	Tyr	Cys	Ser	Ser	Asp	Pro	Gly	Arg	Tyr	Cys
		35					40					45			
Pro	Trp	Gln	Val	Val	Cys	Tyr	Glu	Ser	Arg	Lys	Ile	Cys	Ala	Lys	Asn
	50					55					60				
Ala	Ala	Lys	Met	Arg	Met	Asn	Val	Thr	Lys	Asn	Thr	Ile			
65					70					75					

<210> 22
 <211> 73
 <212> PRT
 <213> Ambrosia trifida (Giant ragweed)

<400> 22

Met	Lys	Asn	Ile	Phe	Met	Leu	Thr	Leu	Phe	Ile	Leu	Ile	Ile	Thr	Ser
1				5					10					15	
Thr	Ile	Lys	Ala	Ile	Gly	Ser	Thr	Asn	Glu	Val	Asp	Glu	Ile	Lys	Gln
			20					25					30		
Glu	Asp	Asp	Gly	Leu	Cys	Tyr	Glu	Gly	Thr	Asn	Cys	Gly	Lys	Val	Gly
		35					40					45			
Lys	Tyr	Cys	Cys	Ser	Pro	Ile	Gly	Lys	Tyr	Cys	Val	Cys	Tyr	Asp	Ser
	50					55					60				
Lys	Ala	Ile	Cys	Asn	Lys	Asn	Cys	Thr							
65					70										

<210> 23
 <211> 154

<212> PRT

<213> um graveolens (Celery)

<400> 23

Met	Gly	Val	Gln	Thr	His	Val	Leu	Glu	Leu	Thr	Ser	Ser	Val	Ser	Ala
1				5					10					15	
Glu	Lys	Ile	Phe	Gln	Gly	Phe	Val	Ile	Asp	Val	Asp	Thr	Val	Leu	Pro
			20					25					30		
Lys	Ala	Ala	Pro	Gly	Ala	Tyr	Lys	Ser	Val	Glu	Ile	Lys	Gly	Asp	Gly
	35						40					45			
Gly	Pro	Gly	Thr	Leu	Lys	Ile	Ile	Thr	Leu	Pro	Asp	Gly	Gly	Pro	Ile
	50					55					60				
Thr	Thr	Met	Thr	Leu	Arg	Ile	Asp	Gly	Val	Asn	Lys	Glu	Ala	Leu	Thr
65					70					75				80	
Phe	Asp	Tyr	Ser	Val	Ile	Asp	Gly	Asp	Ile	Leu	Leu	Gly	Phe	Ile	Glu
				85					90					95	
Ser	Ile	Glu	Asn	His	Val	Val	Leu	Val	Pro	Thr	Ala	Asp	Gly	Gly	Ser
			100					105					110		
Ile	Cys	Lys	Thr	Thr	Ala	Ile	Phe	His	Thr	Lys	Gly	Asp	Ala	Val	Val
	115						120					125			
Pro	Glu	Glu	Asn	Ile	Lys	Tyr	Ala	Asn	Glu	Gln	Asn	Thr	Ala	Leu	Phe
	130					135					140				
Lys	Ala	Leu	Glu	Ala	Tyr	Leu	Ile	Ala	Asn						
145					150										

<210> 24

<211> 162

<212> PRT

<213> Apis mellifera (Honeybee)

<400> 24

Gly	Ser	Leu	Phe	Leu	Leu	Leu	Leu	Ser	Thr	Ser	His	Gly	Trp	Gln	Ile
1				5					10					15	
Arg	Asp	Arg	Ile	Gly	Asp	Asn	Glu	Leu	Glu	Glu	Arg	Ile	Ile	Tyr	Pro
			20					25					30		
Gly	Thr	Leu	Trp	Cys	Gly	His	Gly	Asn	Lys	Ser	Ser	Gly	Pro	Asn	Glu
	35						40					45			
Leu	Gly	Arg	Phe	Lys	His	Thr	Asp	Ala	Cys	Cys	Arg	Thr	His	Asp	Met
	50					55					60				
Cys	Pro	Asp	Val	Met	Ser	Ala	Gly	Glu	Ser	Lys	His	Gly	Leu	Thr	Asn
65					70					75				80	
Thr	Ala	Ser	His	Thr	Arg	Leu	Ser	Cys	Asp	Cys	Asp	Asp	Lys	Phe	Tyr
			85						90					95	
Asp	Cys	Leu	Lys	Asn	Ser	Ala	Asp	Thr	Ile	Ser	Ser	Tyr	Phe	Val	Gly
			100					105					110		
Lys	Met	Tyr	Phe	Asn	Leu	Ile	Asp	Thr	Lys	Cys	Tyr	Lys	Leu	Glu	His
	115						120					125			
Pro	Val	Thr	Gly	Cys	Gly	Glu	Arg	Thr	Glu	Gly	Arg	Cys	Leu	His	Tyr
	130					135					140				
Thr	Val	Asp	Lys	Ser	Lys	Pro	Lys	Val	Tyr	Gln	Trp	Phe	Asp	Leu	Arg
145					150					155					160
Lys	Tyr														

<210> 25

<211> 382

<212> PRT

<213> Apis mellifera (Honeybee)

<400> 25

Met	Ser	Arg	Pro	Leu	Val	Ile	Thr	Glu	Gly	Met	Met	Ile	Gly	Val	Leu
1				5					10					15	
Leu	Met	Leu	Ala	Pro	Ile	Asn	Ala	Leu	Leu	Leu	Gly	Phe	Val	Gln	Ser
			20					25					30		
Thr	Pro	Asp	Asn	Asn	Lys	Thr	Val	Arg	Glu	Phe	Asn	Val	Tyr	Trp	Asn
		35					40					45			
Val	Pro	Thr	Phe	Met	Cys	His	Lys	Tyr	Gly	Leu	Arg	Phe	Glu	Glu	Val
	50					55					60				
Ser	Glu	Lys	Tyr	Gly	Ile	Leu	Gln	Asn	Trp	Met	Asp	Lys	Phe	Arg	Gly
65					70					75					80
Glu	Glu	Ile	Ala	Ile	Leu	Tyr	Asp	Pro	Gly	Met	Phe	Pro	Ala	Leu	Leu
				85					90					95	
Lys	Asp	Pro	Asn	Gly	Asn	Val	Val	Ala	Arg	Asn	Gly	Gly	Val	Pro	Gln
			100					105					110		
Leu	Gly	Asn	Leu	Thr	Lys	His	Leu	Gln	Val	Phe	Arg	Asp	His	Leu	Ile
		115					120					125			
Asn	Gln	Ile	Pro	Asp	Lys	Ser	Phe	Pro	Gly	Val	Gly	Val	Ile	Asp	Phe
	130					135					140				
Glu	Ser	Trp	Arg	Pro	Ile	Phe	Arg	Gln	Asn	Trp	Ala	Ser	Leu	Gln	Pro
145					150					155					160
Tyr	Lys	Lys	Leu	Ser	Val	Glu	Val	Val	Arg	Arg	Glu	His	Pro	Phe	Trp
				165					170					175	
Asp	Asp	Gln	Arg	Val	Glu	Gln	Glu	Ala	Lys	Arg	Arg	Phe	Glu	Lys	Tyr
			180					185					190		
Gly	Gln	Leu	Phe	Met	Glu	Glu	Thr	Leu	Lys	Ala	Ala	Lys	Arg	Met	Arg
		195					200					205			
Pro	Ala	Ala	Asn	Trp	Gly	Tyr	Tyr	Ala	Tyr	Pro	Tyr	Cys	Tyr	Asn	Leu
	210					215					220				
Thr	Pro	Asn	Gln	Pro	Ser	Ala	Gln	Cys	Glu	Ala	Thr	Thr	Met	Gln	Glu
225					230					235					240
Asn	Asp	Lys	Met	Ser	Trp	Leu	Phe	Glu	Ser	Glu	Asp	Val	Leu	Leu	Pro
				245					250					255	
Ser	Val	Tyr	Leu	Arg	Trp	Asn	Leu	Thr	Ser	Gly	Glu	Arg	Val	Gly	Leu
			260					265					270		
Val	Gly	Gly	Arg	Val	Lys	Glu	Ala	Leu	Arg	Ile	Ala	Arg	Gln	Met	Thr
		275					280					285			
Thr	Ser	Arg	Lys	Lys	Val	Leu	Pro	Tyr	Tyr	Trp	Tyr	Lys	Tyr	Gln	Asp
	290					295					300				
Arg	Arg	Asp	Thr	Asp	Leu	Ser	Arg	Ala	Asp	Leu	Glu	Ala	Thr	Leu	Arg
305					310					315					320
Lys	Ile	Thr	Asp	Leu	Gly	Ala	Asp	Gly	Phe	Ile	Ile	Trp	Gly	Ser	Ser
				325					330					335	
Asp	Asp	Ile	Asn	Thr	Lys	Ala	Lys	Cys	Leu	Gln	Phe	Arg	Glu	Tyr	Leu
			340					345					350		
Asn	Asn	Glu	Leu	Gly	Pro	Ala	Val	Lys	Arg	Ile	Ala	Leu	Asn	Asn	Asn
		355					360					365			
Ala	Asn	Asp	Arg	Leu	Thr	Val	Asp	Val	Ser	Val	Asp	Gln	Val		
	370					375					380				

<210> 26

<211> 70

<212> PRT

<213> Apis mellifera(Honeybee)Apis cerana(Ind. honeybee)

<400> 26

Met	Lys	Phe	Leu	Val	Asn	Val	Ala	Leu	Val	Phe	Met	Val	Val	Tyr	Ile
1				5					10					15	
Ser	Tyr	Ile	Tyr	Ala	Ala	Pro	Glu	Pro	Glu	Pro	Ala	Pro	Glu	Pro	Glu
			20					25					30		

Ala	Glu	Ala	Asp	Ala	Glu	Ala	Asp	Pro	Glu	Ala	Gly	Ile	Gly	Ala	Val
		35					40					45			
Leu	Lys	Val	Leu	Thr	Thr	Gly	Leu	Pro	Ala	Leu	Ile	Ser	Trp	Ile	Lys
	50					55					60				
Arg	Lys	Arg	Gln	Gln	Gly										
65					70										

<210> 27
 <211> 614
 <212> PRT
 <213> Arachis hypogaea (Peanut)

<400> 27															
Met	Arg	Gly	Arg	Val	Ser	Pro	Leu	Met	Leu	Leu	Leu	Gly	Ile	Leu	Val
1				5					10					15	
Leu	Ala	Ser	Val	Ser	Ala	Thr	Gln	Ala	Lys	Ser	Pro	Tyr	Arg	Lys	Thr
			20					25					30		
Glu	Asn	Pro	Cys	Ala	Gln	Arg	Cys	Leu	Gln	Ser	Cys	Gln	Gln	Glu	Pro
	35						40					45			
Asp	Asp	Leu	Lys	Gln	Lys	Ala	Cys	Glu	Ser	Arg	Cys	Thr	Lys	Leu	Glu
	50					55					60				
Tyr	Asp	Pro	Arg	Cys	Val	Tyr	Asp	Thr	Gly	Ala	Thr	Asn	Gln	Arg	His
65					70					75				80	
Pro	Pro	Gly	Glu	Arg	Thr	Arg	Gly	Arg	Gln	Pro	Gly	Asp	Tyr	Asp	Asp
				85					90					95	
Asp	Arg	Arg	Gln	Pro	Arg	Arg	Glu	Glu	Gly	Gly	Arg	Trp	Gly	Pro	Ala
			100					105					110		
Glu	Pro	Arg	Glu	Arg	Glu	Arg	Glu	Glu	Asp	Trp	Arg	Gln	Pro	Arg	Glu
			115				120					125			
Asp	Trp	Arg	Arg	Pro	Ser	His	Gln	Gln	Pro	Arg	Lys	Ile	Arg	Pro	Glu
	130					135					140				
Gly	Arg	Glu	Gly	Glu	Gln	Glu	Trp	Gly	Thr	Pro	Gly	Ser	Glu	Val	Arg
145					150					155					160
Glu	Glu	Thr	Ser	Arg	Asn	Asn	Pro	Phe	Tyr	Phe	Pro	Ser	Arg	Arg	Phe
				165					170					175	
Ser	Thr	Arg	Tyr	Gly	Asn	Gln	Asn	Gly	Arg	Ile	Arg	Val	Leu	Gln	Arg
			180					185					190		
Phe	Asp	Gln	Arg	Ser	Lys	Gln	Phe	Gln	Asn	Leu	Gln	Asn	His	Arg	Ile
	195						200					205			
Val	Gln	Ile	Glu	Ala	Arg	Pro	Asn	Thr	Leu	Val	Leu	Pro	Lys	His	Ala
	210					215					220				
Asp	Ala	Asp	Asn	Ile	Leu	Val	Ile	Gln	Gln	Gly	Gln	Ala	Thr	Val	Thr
225					230					235				240	
Val	Ala	Asn	Gly	Asn	Asn	Arg	Lys	Ser	Phe	Asn	Leu	Asp	Glu	Gly	His
				245					250					255	
Ala	Leu	Arg	Ile	Pro	Ser	Gly	Phe	Ile	Ser	Tyr	Ile	Leu	Asn	Arg	His
			260				265						270		
Asp	Asn	Gln	Asn	Leu	Arg	Val	Ala	Lys	Ile	Ser	Met	Pro	Val	Asn	Thr
	275						280					285			
Pro	Gly	Gln	Phe	Glu	Asp	Phe	Phe	Pro	Ala	Ser	Ser	Arg	Asp	Gln	Ser
	290					295					300				
Ser	Tyr	Leu	Gln	Gly	Phe	Ser	Arg	Asn	Thr	Leu	Glu	Ala	Ala	Phe	Asn
305					310					315				320	
Ala	Glu	Phe	Asn	Glu	Ile	Arg	Arg	Val	Leu	Leu	Glu	Glu	Asn	Ala	Gly
				325					330					335	
Gly	Glu	Gln	Glu	Glu	Arg	Gly	Gln	Arg	Arg	Ser	Thr	Arg	Ser	Ser	
			340					345				350			
Asp	Asn	Glu	Gly	Val	Ile	Val	Lys	Val	Ser	Lys	Glu	His	Val	Gln	Glu
	355						360					365			
Leu	Thr	Lys	His	Ala	Lys	Ser	Val	Ser	Lys	Lys	Gly	Ser	Glu	Glu	Glu

370	375	380
Asp Ile Thr Asn Pro	Ile Asn Leu Arg Asp Gly Glu Pro Asp Leu Ser	
385	390	395
Asn Asn Phe Gly Arg	Leu Phe Glu Val Lys Pro Asp Lys Lys Asn Pro	400
	405	410
Gln Leu Gln Asp	Leu Asp Met Met Leu Thr Cys Val Glu Ile Lys Glu	415
	420	425
Gly Ala Leu Met	Leu Pro His Phe Asn Ser Lys Ala Met Val Ile Val	430
	435	440
Val Val Asn Lys Gly Thr	Gly Asn Leu Glu Leu Val Ala Val Arg Lys	445
	450	455
Glu Gln Gln Gln Arg	Gly Arg Arg Glu Gln Glu Trp Glu Glu Glu Glu	460
465	470	475
Glu Asp Glu Glu Glu	Glu Gly Ser Asn Arg Glu Val Arg Arg Tyr Thr	480
	485	490
Ala Arg Leu Lys	Glu Gly Asp Val Phe Ile Met Pro Ala Ala His Pro	495
	500	505
Val Ala Ile Asn Ala Ser	Ser Glu Leu His Leu Leu Gly Phe Gly Ile	510
	515	520
Asn Ala Glu Asn Asn His	Arg Ile Phe Leu Ala Gly Asp Lys Asp Asn	525
	530	535
Val Ile Asp Gln Ile Glu	Lys Gln Ala Lys Asp Leu Ala Phe Pro Gly	540
545	550	555
Ser Gly Glu Gln Val	Glu Lys Leu Ile Lys Asn Gln Arg Glu Ser His	560
	565	570
Phe Val Ser Ala Arg	Pro Gln Ser Gln Ser Pro Ser Ser Pro Glu Lys	575
	580	585
Glu Asp Gln Glu Glu Glu	Asn Gln Gly Gly Lys Gly Pro Leu Leu Ser	590
	595	600
Ile Leu Lys Ala Phe Asn		605
610		

<210> 28
 <211> 626
 <212> PRT
 <213> Arachis hypogaea (Peanut)

<400> 28
Met Arg Gly Arg Val Ser Pro Leu Met Leu Leu Leu Gly Ile Leu Val
1 5 10 15
Leu Ala Ser Val Ser Ala Thr His Ala Lys Ser Ser Pro Tyr Gln Lys
20 25 30
Lys Thr Glu Asn Pro Cys Ala Gln Arg Cys Leu Gln Ser Cys Gln Gln
35 40 45
Glu Pro Asp Asp Leu Lys Gln Lys Ala Cys Glu Ser Arg Cys Thr Lys
50 55 60
Leu Glu Tyr Asp Pro Arg Cys Val Tyr Asp Pro Arg Gly His Thr Gly
65 70 75 80
Thr Thr Asn Gln Arg Ser Pro Pro Gly Glu Arg Thr Arg Gly Arg Gln
85 90 95
Pro Gly Asp Tyr Asp Asp Asp Arg Arg Gln Pro Arg Arg Glu Glu Gly
100 105 110
Gly Arg Trp Gly Pro Ala Gly Pro Arg Glu Arg Glu Arg Glu Glu Asp
115 120 125
Trp Arg Gln Pro Arg Glu Asp Trp Arg Arg Pro Ser His Gln Gln Pro
130 135 140
Arg Lys Ile Arg Pro Glu Gly Arg Glu Gly Glu Gln Glu Trp Gly Thr
145 150 155 160
Pro Gly Ser His Val Arg Glu Glu Thr Ser Arg Asn Asn Pro Phe Tyr
165 170 175

<211> 131
 <212> PRT
 <213> Arabidopsis thaliana (Mouse-ear cress)

<400> 29
 Met Ser Trp Gln Ser Tyr Val Asp Asp His Leu Met Cys Asp Val Glu
 1 5 10 15
 Gly Asn His Leu Thr Ala Ala Ala Ile Leu Gly Gln Asp Gly Ser Val
 20 25 30
 Trp Ala Gln Ser Ala Lys Phe Pro Gln Leu Lys Pro Gln Glu Ile Asp
 35 40 45
 Gly Ile Lys Lys Asp Phe Glu Glu Pro Gly Phe Leu Ala Pro Thr Gly
 50 55 60
 Leu Phe Leu Gly Gly Glu Lys Tyr Met Val Ile Gln Gly Glu Gln Gly
 65 70 75 80
 Ala Val Ile Arg Gly Lys Lys Gly Pro Gly Gly Val Thr Ile Lys Lys
 85 90 95
 Thr Asn Gln Ala Leu Val Phe Gly Phe Tyr Asp Glu Pro Met Thr Gly
 100 105 110
 Gly Gln Cys Asn Leu Val Val Glu Arg Leu Gly Asp Tyr Leu Ile Glu
 115 120 125
 Ser Glu Leu
 130

<210> 30
 <211> 176
 <212> PRT
 <213> Aspergillus restrictus Aspergillus fumigatus

<400> 30
 Met Val Ala Ile Lys Asn Leu Phe Leu Leu Ala Ala Thr Ala Val Ser
 1 5 10 15
 Val Leu Ala Ala Pro Ser Pro Leu Asp Ala Arg Ala Thr Trp Thr Cys
 20 25 30
 Ile Asn Gln Gln Leu Asn Pro Lys Thr Asn Lys Trp Glu Asp Lys Arg
 35 40 45
 Leu Leu Tyr Ser Gln Ala Lys Ala Glu Ser Asn Ser His His Ala Pro
 50 55 60
 Leu Ser Asp Gly Lys Thr Gly Ser Ser Tyr Pro His Trp Phe Thr Asn
 65 70 75 80
 Gly Tyr Asp Gly Asn Gly Lys Leu Ile Lys Gly Arg Thr Pro Ile Lys
 85 90 95
 Phe Gly Lys Ala Asp Cys Asp Arg Pro Pro Lys His Ser Gln Asn Gly
 100 105 110
 Met Gly Lys Asp Asp His Tyr Leu Leu Glu Phe Pro Thr Phe Pro Asp
 115 120 125
 Gly His Asp Tyr Lys Phe Asp Ser Lys Lys Pro Lys Glu Asp Pro Gly
 130 135 140
 Pro Ala Arg Val Ile Tyr Thr Tyr Pro Asn Lys Val Phe Cys Gly Ile
 145 150 155 160
 Val Ala His Gln Arg Gly Asn Gln Gly Asp Leu Arg Leu Cys Ser His
 165 170 175

<210> 31
 <211> 310
 <212> PRT
 <213> Aspergillus fumigatus (Sartorya fumigata)

<400> 31

Met	Ala	Ala	Leu	Leu	Arg	Leu	Ala	Val	Leu	Leu	Pro	Leu	Ala	Ala	Pro
1				5					10					15	
Leu	Val	Ala	Thr	Leu	Pro	Thr	Ser	Pro	Val	Pro	Ile	Ala	Ala	Arg	Ala
		20					25						30		
Thr	Pro	His	Glu	Pro	Val	Phe	Phe	Ser	Trp	Asp	Ala	Gly	Ala	Val	Thr
		35					40					45			
Ser	Phe	Pro	Ile	His	Ser	Ser	Cys	Asn	Ala	Thr	Gln	Arg	Arg	Gln	Ile
	50					55					60				
Glu	Ala	Gly	Leu	Asn	Glu	Ala	Val	Glu	Leu	Ala	Arg	His	Ala	Lys	Ala
65					70				75					80	
His	Ile	Leu	Arg	Trp	Gly	Asn	Glu	Ser	Glu	Ile	Tyr	Arg	Lys	Tyr	Phe
			85						90					95	
Gly	Asn	Arg	Pro	Thr	Met	Glu	Ala	Val	Gly	Ala	Tyr	Asp	Val	Ile	Val
			100					105					110		
Asn	Gly	Asp	Lys	Ala	Asn	Val	Leu	Phe	Arg	Cys	Asp	Asn	Pro	Asp	Gly
		115					120					125			
Asn	Cys	Ala	Leu	Glu	Gly	Trp	Gly	Gly	His	Trp	Arg	Gly	Ala	Asn	Ala
	130					135					140				
Thr	Ser	Glu	Thr	Val	Ile	Cys	Asp	Arg	Ser	Tyr	Thr	Thr	Arg	Arg	Trp
145					150					155					160
Leu	Val	Ser	Met	Cys	Ser	Gln	Gly	Tyr	Thr	Val	Ala	Gly	Ser	Glu	Thr
			165						170					175	
Asn	Thr	Phe	Trp	Ala	Ser	Asp	Leu	Met	His	Arg	Leu	Tyr	His	Val	Pro
			180					185					190		
Ala	Val	Gly	Gln	Gly	Trp	Val	Asp	His	Phe	Ala	Asp	Gly	Tyr	Asp	Glu
		195					200					205			
Val	Ile	Ala	Leu	Ala	Lys	Ser	Asn	Gly	Thr	Glu	Ser	Thr	His	Asp	Ser
	210					215					220				
Glu	Ala	Phe	Glu	Tyr	Phe	Ala	Leu	Glu	Ala	Tyr	Ala	Phe	Asp	Ile	Ala
225					230					235					240
Ala	Pro	Gly	Val	Gly	Cys	Ala	Gly	Glu	Ser	His	Gly	Pro	Asp	Gln	Gly
			245					250						255	
His	Asp	Thr	Gly	Ser	Ala	Ser	Ala	Pro	Ala	Ser	Thr	Ser	Thr	Ser	Ser
			260					265					270		
Ser	Ser	Ser	Gly	Ser	Gly	Ser	Gly	Ala	Thr	Thr	Thr	Pro	Thr	Asp	Ser
	275						280					285			
Pro	Ser	Ala	Thr	Ile	Asp	Val	Pro	Ser	Asn	Cys	His	Thr	His	Glu	Gly
	290					295					300				
Gly	Gln	Leu	His	Cys	Thr										
305					310										

<210> 32

<211> 168

<212> PRT

<213> *Aspergillus fumigatus* (*Sartorya fumigata*)

<400> 32

Met	Ser	Gly	Leu	Lys	Ala	Gly	Asp	Ser	Phe	Pro	Ser	Asp	Val	Val	Phe
1				5					10					15	
Ser	Tyr	Ile	Pro	Trp	Ser	Glu	Asp	Lys	Gly	Glu	Ile	Thr	Ala	Cys	Gly
		20						25					30		
Ile	Pro	Ile	Asn	Tyr	Asn	Ala	Ser	Lys	Glu	Trp	Ala	Asp	Lys	Lys	Val
		35					40					45			
Ile	Leu	Phe	Ala	Leu	Pro	Gly	Ala	Phe	Thr	Pro	Val	Cys	Ser	Ala	Arg
	50					55					60				
His	Val	Pro	Glu	Tyr	Ile	Glu	Lys	Leu	Pro	Glu	Ile	Arg	Ala	Lys	Gly
65					70					75				80	
Val	Asp	Val	Val	Ala	Val	Leu	Ala	Tyr	Asn	Asp	Ala	Tyr	Val	Met	Ser
			85						90				95		
Ala	Trp	Gly	Lys	Ala	Asn	Gln	Val	Thr	Gly	Asp	Asp	Ile	Leu	Phe	Leu

B1
Conf.

Ser	Asp	Pro	Asp	Ala	Arg	Phe	Ser	Lys	Ser	Ile	Gly	Trp	Ala	Asp	Glu
		115						120				125			
Glu	Gly	Arg	Thr	Lys	Arg	Tyr	Ala	Leu	Val	Ile	Asp	His	Gly	Lys	Ile
	130					135					140				
Thr	Tyr	Ala	Ala	Leu	Glu	Pro	Ala	Lys	Asn	His	Leu	Glu	Phe	Ser	Ser
145					150					155					160
Ala	Glu	Thr	Val	Leu	Lys	His	Leu								
				165											

<210> 33
 <211> 152
 <212> PRT
 <213> *Aspergillus fumigatus* (*Sartorya fumigata*)

<400> 33

Met	Lys	Phe	Thr	Thr	Pro	Ile	Ser	Leu	Ile	Ser	Leu	Phe	Val	Ser	Ser
1				5					10					15	
Ala	Leu	Ala	Ala	Pro	Thr	Pro	Glu	Asn	Glu	Ala	Arg	Asp	Ala	Ile	Pro
			20					25					30		
Val	Ser	Val	Ser	Tyr	Asp	Pro	Arg	Tyr	Asp	Asn	Ala	Gly	Thr	Ser	Met
		35					40					45			
Asn	Asp	Val	Ser	Cys	Ser	Asn	Gly	Val	Asn	Gly	Leu	Val	Thr	Lys	Trp
	50					55					60				
Pro	Thr	Phe	Gly	Ser	Val	Pro	Gly	Phe	Ala	Arg	Ile	Gly	Gly	Ala	Pro
65					70					75					80
Thr	Ile	Pro	Gly	Trp	Asn	Ser	Pro	Asn	Cys	Gly	Lys	Cys	Tyr	Lys	Leu
				85					90					95	
Gln	Tyr	Glu	Gln	Asn	Thr	Ile	Tyr	Val	Thr	Ala	Ile	Asp	Ala	Ala	Pro
			100					105					110		
Gly	Gly	Phe	Asn	Ile	Ala	Thr	Ser	Ala	Met	Asp	Gln	Leu	Thr	Asn	Gly
		115					120					125			
Met	Ala	Val	Glu	Leu	Gly	Arg	Val	Gln	Ala	Thr	Tyr	Glu	Glu	Ala	Asp
	130					135					140				
Pro	Ser	His	Cys	Ala	Ser	Gly	Val								
145						150									

<210> 34
 <211> 159
 <212> PRT
 <213> *Betula verrucosa* (White birch) (*Betula pendula*)

<400> 34

Gly	Val	Phe	Asn	Tyr	Glu	Thr	Glu	Thr	Thr	Ser	Val	Ile	Pro	Ala	Ala
1				5					10					15	
Arg	Leu	Phe	Lys	Ala	Phe	Ile	Leu	Asp	Gly	Asp	Asn	Leu	Phe	Pro	Lys
			20					25					30		
Val	Ala	Pro	Gln	Ala	Ile	Ser	Ser	Val	Glu	Asn	Ile	Glu	Gly	Asn	Gly
		35					40					45			
Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Ser	Phe	Pro	Glu	Gly	Phe	Pro	Phe
	50					55					60				
Lys	Tyr	Val	Lys	Asp	Arg	Val	Asp	Glu	Val	Asp	His	Thr	Asn	Phe	Lys
65					70					75					80
Tyr	Asn	Tyr	Ser	Val	Ile	Glu	Gly	Gly	Pro	Ile	Gly	Asp	Thr	Leu	Glu
				85					90					95	
Lys	Ile	Ser	Asn	Glu	Ile	Lys	Ile	Val	Ala	Thr	Pro	Asp	Gly	Gly	Ser
			100					105					110		
Ile	Leu	Lys	Ile	Ser	Asn	Lys	Tyr	His	Thr	Lys	Gly	Asp	His	Glu	Val
		115					120					125			

Lys	Ala	Glu	Gln	Val	Lys	Ala	Ser	Lys	Glu	Met	Gly	Glu	Thr	Leu	Leu
130						135					140				
Arg	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Ser	Asp	Ala	Tyr	Asn	
145					150					155					

<210> 35

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 35

Gly	Val	Phe	Asn	Tyr	Glu	Ser	Glu	Thr	Thr	Ser	Val	Ile	Pro	Ala	Ala
1			5					10						15	
Arg	Leu	Phe	Lys	Ala	Phe	Ile	Leu	Glu	Gly	Asp	Thr	Leu	Ile	Pro	Lys
		20					25					30			
Val	Ala	Pro	Gln	Ala	Ile	Ser	Ser	Val	Glu	Asn	Ile	Glu	Gly	Asn	Gly
		35				40					45				
Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Thr	Phe	Pro	Glu	Gly	Ser	Pro	Phe
	50				55					60					
Lys	Tyr	Val	Lys	Glu	Arg	Val	Asp	Glu	Val	Asp	His	Ala	Asn	Phe	Lys
65					70				75					80	
Tyr	Ser	Tyr	Ser	Met	Ile	Glu	Gly	Gly	Ala	Leu	Gly	Asp	Thr	Leu	Glu
				85				90						95	
Lys	Ile	Cys	Asn	Glu	Ile	Lys	Ile	Val	Ala	Thr	Pro	Asp	Gly	Gly	Ser
			100				105						110		
Ile	Leu	Lys	Ile	Ser	Asn	Lys	Tyr	His	Thr	Lys	Gly	Asp	Gln	Glu	Met
		115				120						125			
Lys	Ala	Glu	His	Met	Lys	Ala	Ile	Lys	Glu	Lys	Gly	Glu	Ala	Leu	Leu
	130					135					140				
Arg	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Ser	Asp	Ala	Tyr	Asn	
145					150					155					

<210> 36

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 36

Gly	Val	Phe	Asn	Tyr	Glu	Ile	Glu	Thr	Thr	Ser	Val	Ile	Pro	Ala	Ala
1			5					10						15	
Arg	Leu	Phe	Lys	Ala	Phe	Ile	Leu	Asp	Gly	Asp	Asn	Leu	Val	Pro	Lys
		20					25					30			
Val	Ala	Pro	Gln	Ala	Ile	Ser	Ser	Val	Glu	Asn	Ile	Glu	Gly	Asn	Gly
		35				40					45				
Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Asn	Phe	Pro	Glu	Gly	Phe	Pro	Phe
	50				55					60					
Lys	Tyr	Val	Lys	Asp	Arg	Val	Asp	Glu	Val	Asp	His	Thr	Asn	Phe	Lys
65					70				75					80	
Tyr	Asn	Tyr	Ser	Val	Ile	Glu	Gly	Gly	Pro	Val	Gly	Asp	Thr	Leu	Glu
			85					90						95	
Lys	Ile	Ser	Asn	Glu	Ile	Lys	Ile	Val	Ala	Thr	Pro	Asp	Gly	Gly	Cys
			100				105						110		
Val	Leu	Lys	Ile	Ser	Asn	Lys	Tyr	His	Thr	Lys	Gly	Asn	His	Glu	Val
		115				120						125			
Lys	Ala	Glu	Gln	Val	Lys	Ala	Ser	Lys	Glu	Met	Gly	Glu	Thr	Leu	Leu
	130					135					140				
Arg	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Ser	Asp	Ala	Tyr	Asn	
145					150					155					

<210> 37
 <211> 159
 <212> PRT
 <213> Betula verrucosa (White birch) (Betula pendula)

<400> 37
 Gly Val Phe Asn Tyr Glu Thr Glu Ala Thr Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asp Asn Leu Phe Pro Lys
 20 25 30
 Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Ser Phe Pro Glu Gly Ile Pro Phe
 50 55 60
 Lys Tyr Val Lys Gly Arg Val Asp Glu Val Asp His Thr Asn Phe Lys
 65 70 75 80
 Tyr Ser Tyr Ser Val Ile Glu Gly Gly Pro Val Gly Asp Thr Leu Glu
 85 90 95
 Lys Ile Ser Asn Glu Ile Lys Ile Val Ala Thr Pro Asn Gly Gly Ser
 100 105 110
 Ile Leu Lys Ile Asn Asn Lys Tyr His Thr Lys Gly Asp His Glu Val
 115 120 125
 Lys Ala Glu Gln Ile Lys Ala Ser Lys Glu Met Gly Glu Thr Leu Leu
 130 135 140
 Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
 145 150 155

<210> 38
 <211> 159
 <212> PRT
 <213> Betula verrucosa (White birch) (Betula pendula)

<400> 38
 Gly Val Phe Asn Tyr Glu Ile Glu Ala Thr Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asp Asn Leu Phe Pro Lys
 20 25 30
 Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Ser Phe Pro Glu Gly Phe Pro Phe
 50 55 60
 Lys Tyr Val Lys Asp Arg Val Asp Glu Val Asp His Thr Asn Phe Lys
 65 70 75 80
 Tyr Ser Tyr Ser Val Ile Glu Gly Gly Pro Val Gly Asp Thr Leu Glu
 85 90 95
 Lys Ile Ser Asn Glu Ile Lys Ile Val Ala Thr Pro Asn Gly Gly Ser
 100 105 110
 Ile Leu Lys Ile Asn Asn Lys Tyr His Thr Lys Gly Asp His Glu Val
 115 120 125
 Lys Ala Glu Gln Ile Lys Ala Ser Lys Glu Met Gly Glu Thr Leu Leu
 130 135 140
 Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
 145 150 155

<210> 39
 <211> 159
 <212> PRT
 <213> Betula verrucosa (White birch) (Betula pendula)

<400> 39

Gly	Val	Phe	Asn	Tyr	Glu	Ser	Glu	Thr	Thr	Ser	Val	Ile	Pro	Ala	Ala	
1				5					10					15		
Arg	Leu	Phe	Lys	Ala	Phe	Ile	Leu	Glu	Gly	Asp	Asn	Leu	Ile	Pro	Lys	
			20					25					30			
Val	Ala	Pro	Gln	Ala	Ile	Ser	Ser	Val	Glu	Asn	Ile	Glu	Gly	Asn	Gly	
		35					40					45				
Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Asn	Phe	Pro	Glu	Gly	Phe	Pro	Phe	
	50					55					60					
Lys	Tyr	Val	Lys	Asp	Arg	Val	Asp	Glu	Val	Asp	His	Thr	Asn	Phe	Lys	
65					70					75					80	
Tyr	Asn	Tyr	Ser	Val	Ile	Glu	Gly	Gly	Pro	Val	Gly	Asp	Thr	Leu	Glu	
				85					90					95		
Lys	Ile	Ser	Asn	Glu	Ile	Lys	Ile	Val	Ala	Thr	Pro	Asp	Gly	Gly	Cys	
			100					105					110			
Val	Leu	Lys	Ile	Ser	Asn	Lys	Tyr	His	Thr	Lys	Gly	Asn	His	Glu	Val	
		115					120					125				
Lys	Ala	Glu	Gln	Val	Lys	Ala	Ser	Lys	Glu	Met	Gly	Glu	Thr	Leu	Leu	
	130					135					140					
Arg	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Ser	Asp	Ala	Tyr	Asn		
145					150					155						

<210> 40

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 40

Gly	Val	Phe	Asn	Tyr	Glu	Thr	Glu	Ala	Thr	Ser	Val	Ile	Pro	Ala	Ala	
1				5					10					15		
Arg	Leu	Phe	Lys	Ala	Phe	Ile	Leu	Asp	Gly	Asp	Asn	Leu	Phe	Pro	Lys	
			20					25					30			
Val	Ala	Pro	Gln	Ala	Ile	Ser	Ser	Val	Glu	Asn	Ile	Glu	Gly	Asn	Gly	
		35					40					45				
Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Ser	Phe	Pro	Glu	Gly	Phe	Pro	Phe	
	50					55					60					
Lys	Tyr	Val	Lys	Asp	Arg	Val	Asp	Glu	Val	Asp	His	Thr	Asn	Phe	Lys	
65					70					75					80	
Tyr	Ser	Tyr	Ser	Val	Ile	Glu	Gly	Gly	Pro	Val	Gly	Asp	Thr	Leu	Glu	
				85					90					95		
Lys	Ile	Ser	Asn	Glu	Ile	Lys	Ile	Val	Ala	Thr	Pro	Asn	Gly	Gly	Ser	
			100					105					110			
Ile	Leu	Lys	Ile	Asn	Asn	Lys	Tyr	His	Thr	Lys	Gly	Asp	His	Glu	Val	
		115					120					125				
Lys	Ala	Glu	Gln	Ile	Lys	Ala	Ser	Lys	Glu	Met	Gly	Glu	Thr	Leu	Leu	
	130					135					140					
Arg	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Ser	Asp	Ala	Tyr	Asn		
145					150					155						

<210> 41

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 41

Gly	Val	Phe	Asn	Tyr	Glu	Ser	Glu	Thr	Thr	Ser	Val	Ile	Pro	Ala	Ala	
1				5					10					15		
Arg	Leu	Phe	Lys	Ala	Phe	Ile	Leu	Glu	Gly	Asp	Thr	Leu	Ile	Pro	Lys	

			20					25				30			
Val	Ala	Pro	Gln	Ala	Ile	Ser	Ser	Val	Glu	Asn	Ile	Glu	Gly	Asn	Gly
		35					40					45			
Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Thr	Phe	Pro	Glu	Gly	Ser	Pro	Phe
	50					55					60				
Lys	Tyr	Val	Lys	Glu	Arg	Val	Asp	Glu	Val	Asp	His	Ala	Asn	Phe	Lys
65					70					75				80	
Tyr	Ser	Tyr	Ser	Met	Ile	Glu	Gly	Gly	Ala	Leu	Gly	Asp	Thr	Leu	Glu
				85					90					95	
Lys	Ile	Cys	Asn	Glu	Ile	Lys	Ile	Val	Ala	Thr	Pro	Asp	Gly	Gly	Ser
			100					105					110		
Ile	Leu	Lys	Ile	Ser	Asn	Lys	Tyr	His	Thr	Lys	Gly	Asp	His	Glu	Met
	115					120						125			
Lys	Ala	Glu	His	Met	Lys	Ala	Ile	Lys	Glu	Lys	Gly	Glu	Ala	Leu	Leu
	130					135					140				
Arg	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Ser	Asp	Ala	Tyr	Asn	
145					150					155					

<210> 42

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 42

Gly	Val	Phe	Asn	Tyr	Glu	Thr	Glu	Ala	Thr	Ser	Val	Ile	Pro	Ala	Ala
1				5					10					15	
Arg	Met	Phe	Lys	Ala	Phe	Ile	Leu	Asp	Gly	Asp	Lys	Leu	Val	Pro	Lys
			20					25				30			
Val	Ala	Pro	Gln	Ala	Ile	Ser	Ser	Val	Glu	Asn	Ile	Glu	Gly	Asn	Gly
		35					40					45			
Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Asn	Phe	Pro	Glu	Gly	Phe	Pro	Phe
	50					55					60				
Lys	Tyr	Val	Lys	Asp	Arg	Val	Asp	Glu	Val	Asp	His	Thr	Asn	Phe	Lys
65					70					75				80	
Tyr	Asn	Tyr	Ser	Val	Ile	Glu	Gly	Gly	Pro	Val	Gly	Asp	Thr	Leu	Glu
			85					90						95	
Lys	Ile	Ser	Asn	Glu	Ile	Lys	Ile	Val	Ala	Thr	Pro	Asp	Gly	Gly	Cys
			100					105					110		
Val	Leu	Lys	Ile	Ser	Asn	Lys	Tyr	His	Thr	Lys	Gly	Asn	His	Glu	Val
	115					120						125			
Lys	Ala	Glu	Gln	Val	Lys	Ala	Ser	Lys	Glu	Met	Gly	Glu	Thr	Leu	Leu
	130					135					140				
Arg	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Ser	Asp	Ala	Tyr	Asn	
145					150					155					

<210> 43

<211> 159

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 43

Gly	Val	Phe	Asn	Tyr	Glu	Ser	Glu	Thr	Thr	Ser	Val	Ile	Pro	Ala	Ala
1				5					10					15	
Arg	Leu	Phe	Lys	Ala	Phe	Ile	Leu	Asp	Gly	Asp	Asn	Leu	Ile	Pro	Lys
			20					25				30			
Val	Ala	Pro	Gln	Ala	Ile	Ser	Ser	Val	Glu	Asn	Ile	Glu	Gly	Asn	Gly
		35					40					45			
Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Thr	Phe	Pro	Glu	Gly	Ser	Pro	Phe
	50					55					60				

Lys	Tyr	Val	Lys	Glu	Arg	Val	Asp	Glu	Val	Asp	His	Ala	Asn	Phe	Lys
65					70					75				80	
Tyr	Ser	Tyr	Ser	Met	Ile	Glu	Gly	Gly	Ala	Leu	Gly	Asp	Thr	Leu	Glu
			85						90					95	
Lys	Ile	Cys	Asn	Glu	Ile	Lys	Ile	Val	Ala	Thr	Pro	Asp	Gly	Gly	Ser
			100					105					110		
Ile	Leu	Lys	Ile	Ser	Asn	Lys	Tyr	His	Thr	Lys	Gly	Asp	His	Glu	Met
		115					120					125			
Lys	Ala	Glu	His	Met	Lys	Ala	Ile	Lys	Glu	Lys	Gly	Glu	Ala	Leu	Leu
	130					135					140				
Arg	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Ser	Asp	Ala	Tyr	Asn	
145					150					155					

<210> 44

<211> 133

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 44

Met	Ser	Trp	Gln	Thr	Tyr	Val	Asp	Glu	His	Leu	Met	Cys	Asp	Ile	Asp
1				5					10					15	
Gly	Gln	Ala	Ser	Asn	Ser	Leu	Ala	Ser	Ala	Ile	Val	Gly	His	Asp	Gly
			20					25					30		
Ser	Val	Trp	Ala	Gln	Ser	Ser	Ser	Phe	Pro	Gln	Phe	Lys	Pro	Gln	Glu
		35					40					45			
Ile	Thr	Gly	Ile	Met	Lys	Asp	Phe	Glu	Glu	Pro	Gly	His	Leu	Ala	Pro
	50					55					60				
Thr	Gly	Leu	His	Leu	Gly	Gly	Ile	Lys	Tyr	Met	Val	Ile	Gln	Gly	Glu
65					70					75				80	
Ala	Gly	Ala	Val	Ile	Arg	Gly	Lys	Lys	Gly	Ser	Gly	Gly	Ile	Thr	Ile
				85					90					95	
Lys	Lys	Thr	Gly	Gln	Ala	Leu	Val	Phe	Gly	Ile	Tyr	Glu	Glu	Pro	Val
			100					105					110		
Thr	Pro	Gly	Gln	Cys	Asn	Met	Val	Val	Glu	Arg	Leu	Gly	Asp	Tyr	Leu
		115					120					125			
Ile	Asp	Gln	Gly	Leu											
	130														

<210> 45

<211> 205

<212> PRT

<213> Betula verrucosa (White birch) (Betula pendula)

<400> 45

Met	Pro	Cys	Ser	Thr	Glu	Ala	Met	Glu	Lys	Ala	Gly	His	Gly	His	Ala
1				5					10					15	
Ser	Thr	Pro	Arg	Lys	Arg	Ser	Leu	Ser	Asn	Ser	Ser	Phe	Arg	Leu	Arg
			20					25					30		
Ser	Glu	Ser	Leu	Asn	Thr	Leu	Arg	Leu	Arg	Arg	Ile	Phe	Asp	Leu	Phe
		35					40					45			
Asp	Lys	Asn	Ser	Asp	Gly	Ile	Ile	Thr	Val	Asp	Glu	Leu	Ser	Arg	Ala
	50					55					60				
Leu	Asn	Leu	Leu	Gly	Leu	Glu	Thr	Asp	Leu	Ser	Glu	Leu	Glu	Ser	Thr
65					70					75				80	
Val	Lys	Ser	Phe	Thr	Arg	Glu	Gly	Asn	Ile	Gly	Leu	Gln	Phe	Glu	Asp
				85					90					95	
Phe	Ile	Ser	Leu	His	Gln	Ser	Leu	Asn	Asp	Ser	Tyr	Phe	Ala	Tyr	Gly
			100					105					110		
Gly	Glu	Asp	Glu	Asp	Asp	Asn	Glu	Glu	Asp	Met	Arg	Lys	Ser	Ile	Leu

		115					120					125							
Ser	Gln	Glu	Glu	Ala	Asp	Ser	Phe	Gly	Gly	Phe	Lys	Val	Phe	Asp	Glu				
	130						135					140							
Asp	Gly	Asp	Gly	Tyr	Ile	Ser	Ala	Arg	Glu	Leu	Gln	Met	Val	Leu	Gly				
145					150					155					160				
Lys	Leu	Gly	Phe	Ser	Glu	Gly	Ser	Glu	Ile	Asp	Arg	Val	Glu	Lys	Met				
				165					170					175					
Ile	Val	Ser	Val	Asp	Ser	Asn	Arg	Asp	Gly	Arg	Val	Asp	Phe	Phe	Glu				
			180					185					190						
Phe	Lys	Asp	Met	Met	Arg	Ser	Val	Leu	Val	Arg	Ser	Ser							
		195					200					205							

<210> 46
 <211> 352
 <212> PRT
 <213> *Blattella germanica* (German cockroach)

<400> 46

Met	Ile	Gly	Leu	Lys	Leu	Val	Thr	Val	Leu	Phe	Ala	Val	Ala	Thr	Ile				
1				5					10					15					
Thr	His	Ala	Ala	Glu	Leu	Gln	Arg	Val	Pro	Leu	Tyr	Lys	Leu	Val	His				
		20					25						30						
Val	Phe	Ile	Asn	Thr	Gln	Tyr	Ala	Gly	Ile	Thr	Lys	Ile	Gly	Asn	Gln				
		35					40					45							
Asn	Phe	Leu	Thr	Val	Phe	Asp	Ser	Thr	Ser	Cys	Asn	Val	Val	Val	Ala				
50					55					60									
Ser	Gln	Glu	Cys	Val	Gly	Gly	Ala	Cys	Val	Cys	Pro	Asn	Leu	Gln	Lys				
65					70					75				80					
Tyr	Glu	Lys	Leu	Lys	Pro	Lys	Tyr	Ile	Ser	Asp	Gly	Asn	Val	Gln	Val				
				85					90					95					
Lys	Phe	Phe	Asp	Thr	Gly	Ser	Ala	Val	Gly	Arg	Gly	Ile	Glu	Asp	Ser				
			100					105					110						
Leu	Thr	Ile	Ser	Asn	Leu	Thr	Thr	Ser	Gln	Gln	Asp	Ile	Val	Leu	Ala				
		115					120					125							
Asp	Glu	Leu	Ser	Gln	Glu	Val	Cys	Ile	Leu	Ser	Ala	Asp	Val	Val	Val				
130						135					140								
Gly	Ile	Ala	Ala	Pro	Gly	Cys	Pro	Asn	Ala	Leu	Lys	Gly	Lys	Thr	Val				
145					150					155				160					
Leu	Glu	Asn	Phe	Val	Glu	Glu	Asn	Leu	Ile	Ala	Pro	Val	Phe	Ser	Ile				
				165					170					175					
His	His	Ala	Arg	Phe	Gln	Asp	Gly	Glu	His	Phe	Gly	Glu	Ile	Ile	Phe				
		180					185						190						
Gly	Gly	Ser	Asp	Trp	Lys	Tyr	Val	Asp	Gly	Glu	Phe	Thr	Tyr	Val	Pro				
		195					200					205							
Leu	Val	Gly	Asp	Asp	Ser	Trp	Lys	Phe	Arg	Leu	Asp	Gly	Val	Lys	Ile				
210					215						220								
Gly	Asp	Thr	Thr	Val	Ala	Pro	Ala	Gly	Thr	Gln	Ala	Ile	Ile	Asp	Thr				
225					230					235									
Ser	Lys	Ala	Ile	Ile	Val	Gly	Pro	Lys	Ala	Tyr	Val	Asn	Pro	Ile	Asn				
				245					250					255					
Glu	Ala	Ile	Gly	Cys	Val	Val	Glu	Lys	Thr	Thr	Thr	Arg	Arg	Ile	Cys				
			260				265					270							
Lys	Leu	Asp	Cys	Ser	Lys	Ile	Pro	Ser	Leu	Pro	Asp	Val	Thr	Phe	Val				
		275					280					285							
Ile	Asn	Gly	Arg	Asn	Phe	Asn	Ile	Ser	Ser	Gln	Tyr	Tyr	Ile	Gln	Gln				
	290					295					300								
Asn	Gly	Asn	Leu	Cys	Tyr	Ser	Gly	Phe	Gln	Pro	Cys	Gly	His	Ser	Asp				
305					310				315						320				
His	Phe	Phe	Ile	Gly	Asp	Phe	Phe	Val	Asp	His	Tyr	Tyr	Ser	Glu	Phe				
				325					330					335					

Asn Trp Glu Asn Lys Thr Met Gly Phe Gly Arg Ser Val Glu Ser Val
 340 345 350

<210> 47
 <211> 182
 <212> PRT
 <213> *Blattella germanica* (German cockroach)

<400> 47
 Ala Val Leu Ala Leu Cys Ala Thr Asp Thr Leu Ala Asn Glu Asp Cys
 1 5 10 15
 Phe Arg His Glu Ser Leu Val Pro Asn Leu Asp Tyr Glu Arg Phe Arg
 20 25 30
 Gly Ser Trp Ile Ile Ala Ala Gly Thr Ser Glu Ala Leu Thr Gln Tyr
 35 40 45
 Lys Cys Trp Ile Asp Arg Phe Ser Tyr Asp Asp Ala Leu Val Ser Lys
 50 55 60
 Tyr Thr Asp Ser Gln Gly Lys Asn Arg Thr Thr Ile Arg Gly Arg Thr
 65 70 75 80
 Lys Phe Glu Gly Asn Lys Phe Thr Ile Asp Tyr Asn Asp Lys Gly Lys
 85 90 95
 Ala Phe Ser Ala Pro Tyr Ser Val Leu Ala Thr Asp Tyr Glu Asn Tyr
 100 105 110
 Ala Ile Val Glu Gly Cys Pro Ala Ala Asn Gly His Val Ile Tyr
 115 120 125
 Val Gln Ile Arg Phe Ser Val Arg Arg Phe His Pro Lys Leu Gly Asp
 130 135 140
 Lys Glu Met Ile Gln His Tyr Thr Leu Asp Gln Val Asn Gln His Lys
 145 150 155 160
 Lys Ala Ile Glu Glu Asp Leu Lys His Phe Asn Leu Lys Tyr Glu Asp
 165 170 175
 Leu His Ser Thr Cys His
 180

<210> 48
 <211> 203
 <212> PRT
 <213> *Blattella germanica* (German cockroach)

<400> 48
 Ala Pro Ser Tyr Lys Leu Thr Tyr Cys Pro Val Lys Ala Leu Gly Glu
 1 5 10 15
 Pro Ile Arg Phe Leu Leu Ser Tyr Gly Glu Lys Asp Phe Glu Asp Tyr
 20 25 30
 Arg Phe Gln Glu Gly Asp Trp Pro Asn Leu Lys Pro Ser Met Pro Phe
 35 40 45
 Gly Lys Thr Pro Val Leu Glu Ile Asp Gly Lys Gln Thr His Gln Ser
 50 55 60
 Val Ala Ile Ser Arg Tyr Leu Gly Lys Gln Phe Gly Leu Ser Gly Lys
 65 70 75 80
 Asp Asp Trp Glu Asn Leu Glu Ile Asp Met Ile Val Asp Thr Ile Ser
 85 90 95
 Asp Phe Arg Ala Ala Ile Ala Asn Tyr His Tyr Asp Ala Asp Glu Asn
 100 105 110
 Ser Lys Gln Lys Lys Trp Asp Pro Leu Lys Lys Glu Thr Ile Pro Tyr
 115 120 125
 Tyr Thr Lys Lys Phe Asp Glu Val Val Lys Ala Asn Gly Gly Tyr Leu
 130 135 140
 Ala Ala Gly Lys Leu Thr Trp Ala Asp Phe Tyr Phe Val Ala Ile Leu

145					150					155				160	
Asp	Tyr	Leu	Asn	His	Met	Ala	Lys	Glu	Asp	Leu	Val	Ala	Asn	Gln	Pro
				165					170					175	
Asn	Leu	Lys	Ala	Leu	Arg	Glu	Lys	Val	Leu	Gly	Leu	Pro	Ala	Ile	Lys
			180					185					190		
Ala	Trp	Val	Ala	Lys	Arg	Pro	Pro	Thr	Asp	Leu					
		195					200								

<210> 49
 <211> 144
 <212> PRT
 <213> Blomia tropicalis (Mite)

<400> 49															
Met	Lys	Ser	Val	Leu	Ile	Phe	Leu	Val	Ala	Ile	Ala	Leu	Phe	Ser	Ala
1				5					10					15	
Asn	Ile	Val	Ser	Ala	Asp	Glu	Gln	Thr	Thr	Arg	Gly	Arg	His	Thr	Glu
			20					25					30		
Pro	Asp	Asp	His	His	Glu	Lys	Pro	Thr	Thr	Gln	Cys	Thr	His	Glu	Glu
		35				40					45				
Thr	Thr	Ser	Thr	Gln	His	His	His	Glu	Glu	Val	Val	Thr	Thr	Gln	Thr
	50					55					60				
Pro	His	His	Glu	Glu	Lys	Thr	Thr	Thr	Glu	Glu	Thr	His	His	Ser	Asp
65					70					75					80
Asp	Leu	Ile	Val	His	Glu	Gly	Gly	Lys	Thr	Tyr	His	Val	Val	Cys	His
				85					90					95	
Glu	Glu	Gly	Pro	Ile	His	Ile	Gln	Glu	Met	Cys	Asn	Lys	Tyr	Ile	Ile
			100					105					110		
Cys	Ser	Lys	Ser	Gly	Ser	Leu	Trp	Tyr	Ile	Thr	Val	Met	Pro	Cys	Ser
		115					120					125			
Ile	Gly	Thr	Lys	Phe	Asp	Pro	Ile	Ser	Arg	Asn	Cys	Val	Leu	Asp	Asn
	130					135					140				

<210> 50
 <211> 172
 <212> PRT
 <213> Bos taurus (Bovine)

<400> 50															
Met	Lys	Ala	Val	Phe	Leu	Thr	Leu	Leu	Phe	Gly	Leu	Val	Cys	Thr	Ala
1				5					10					15	
Gln	Glu	Thr	Pro	Ala	Glu	Ile	Asp	Pro	Ser	Lys	Ile	Pro	Gly	Glu	Trp
			20					25					30		
Arg	Ile	Ile	Tyr	Ala	Ala	Ala	Asp	Asn	Lys	Asp	Lys	Ile	Val	Glu	Gly
		35					40					45			
Gly	Pro	Leu	Arg	Asn	Tyr	Tyr	Arg	Arg	Ile	Glu	Cys	Ile	Asn	Asp	Cys
	50					55					60				
Glu	Ser	Leu	Ser	Ile	Thr	Phe	Tyr	Leu	Lys	Asp	Gln	Gly	Thr	Cys	Leu
65					70					75					80
Leu	Leu	Thr	Glu	Val	Ala	Lys	Arg	Gln	Glu	Gly	Tyr	Val	Tyr	Val	Leu
				85					90					95	
Glu	Phe	Tyr	Gly	Thr	Asn	Thr	Leu	Glu	Val	Ile	His	Val	Ser	Glu	Asn
			100					105					110		
Met	Leu	Val	Thr	Tyr	Val	Glu	Asn	Tyr	Asp	Gly	Glu	Arg	Ile	Thr	Lys
		115					120					125			
Met	Thr	Glu	Gly	Leu	Ala	Lys	Gly	Thr	Ser	Phe	Thr	Pro	Glu	Glu	Leu
	130					135					140				
Glu	Lys	Tyr	Gln	Gln	Leu	Asn	Ser	Glu	Arg	Gly	Val	Pro	Asn	Glu	Asn
145					150					155					160

Ile Glu Asn Leu Ile Lys Thr Asp Asn Cys Pro Pro
 165 170

<210> 51
 <211> 178
 <212> PRT
 <213> Bos taurus (Bovine)

<400> 51
 Met Lys Cys Leu Leu Leu Ala Leu Ala Leu Thr Cys Gly Ala Gln Ala
 1 5 10 15
 Leu Ile Val Thr Gln Thr Met Lys Gly Leu Asp Ile Gln Lys Val Ala
 20 25 30
 Gly Thr Trp Tyr Ser Leu Ala Met Ala Ala Ser Asp Ile Ser Leu Leu
 35 40 45
 Asp Ala Gln Ser Ala Pro Leu Arg Val Tyr Val Glu Glu Leu Lys Pro
 50 55 60
 Thr Pro Glu Gly Asp Leu Glu Ile Leu Leu Gln Lys Trp Glu Asn Gly
 65 70 75 80
 Glu Cys Ala Gln Lys Lys Ile Ile Ala Glu Lys Thr Lys Ile Pro Ala
 85 90 95
 Val Phe Lys Ile Asp Ala Leu Asn Glu Asn Lys Val Leu Val Leu Asp
 100 105 110
 Thr Asp Tyr Lys Lys Tyr Leu Leu Phe Cys Met Glu Asn Ser Ala Glu
 115 120 125
 Pro Glu Gln Ser Leu Ala Cys Gln Cys Leu Val Arg Thr Pro Glu Val
 130 135 140
 Asp Asp Glu Ala Leu Glu Lys Phe Asp Lys Ala Leu Lys Ala Leu Pro
 145 150 155 160
 Met His Ile Arg Leu Ser Phe Asn Pro Thr Gln Leu Glu Glu Gln Cys
 165 170 175
 His Ile

<210> 52
 <211> 129
 <212> PRT
 <213> Brassica juncea (Leaf mustard) (Indian mustard)

<400> 52
 Ala Gly Pro Phe Arg Phe Pro Arg Cys Arg Lys Glu Phe Gln Gln Ala
 1 5 10 15
 Gln His Leu Arg Ala Cys Gln Gln Trp Leu His Lys Gln Ala Met Gln
 20 25 30
 Ser Gly Ser Gly Pro Gln Pro Gln Gly Pro Gln Gln Arg Pro Pro Leu
 35 40 45
 Leu Gln Gln Cys Cys Asn Glu Leu His Gln Glu Glu Pro Leu Cys Val
 50 55 60
 Cys Pro Thr Leu Lys Gly Ala Ser Lys Ala Val Lys Gln Gln Ile Arg
 65 70 75 80
 Gln Gln Gly Gln Gln Gln Gly Gln Gln Gly Gln Gln Leu Gln His Glu
 85 90 95
 Ile Ser Arg Ile Tyr Gln Thr Ala Thr His Leu Pro Arg Val Cys Asn
 100 105 110
 Ile Pro Arg Val Ser Ile Cys Pro Phe Gln Lys Thr Met Pro Gly Pro
 115 120 125
 Ser

<210> 53
 <211> 350
 <212> PRT
 <213> Candida albicans (Yeast)

<400> 53
 Met Ser Glu Gln Ile Pro Lys Thr Gln Lys Ala Val Val Phe Asp Thr
 1 5 10 15
 Asn Gly Gly Gln Leu Val Tyr Lys Asp Tyr Pro Val Pro Thr Pro Lys
 20 25 30
 Pro Asn Glu Leu Leu Ile His Val Lys Tyr Ser Gly Val Cys His Thr
 35 40 45
 Asp Leu His Ala Arg Lys Gly Asp Trp Pro Leu Ala Thr Lys Leu Pro
 50 55 60
 Leu Val Gly Gly His Glu Gly Ala Gly Val Val Gly Met Gly Glu
 65 70 75 80
 Asn Val Lys Gly Trp Lys Ile Gly Asp Phe Ala Gly Ile Lys Trp Leu
 85 90 95
 Asn Gly Ser Cys Met Ser Cys Glu Phe Cys Gln Gln Gly Ala Glu Pro
 100 105 110
 Asn Cys Gly Glu Ala Asp Leu Ser Gly Tyr Thr His Asp Gly Ser Phe
 115 120 125
 Glu Gln Tyr Ala Thr Ala Asp Ala Val Gln Ala Ala Lys Ile Pro Ala
 130 135 140
 Gly Thr Asp Leu Ala Asn Val Ala Pro Ile Leu Cys Ala Gly Val Thr
 145 150 155 160
 Val Tyr Lys Ala Leu Lys Thr Ala Asp Leu Ala Ala Gly Gln Trp Val
 165 170 175
 Ala Ile Ser Gly Ala Gly Gly Gly Leu Gly Ser Leu Ala Val Gln Tyr
 180 185 190
 Ala Arg Ala Met Gly Leu Arg Val Val Ala Ile Asp Gly Gly Asp Glu
 195 200 205
 Lys Gly Glu Phe Val Lys Ser Leu Gly Ala Glu Ala Tyr Val Asp Phe
 210 215 220
 Thr Lys Asp Lys Asp Ile Val Glu Ala Val Lys Lys Ala Thr Asp Gly
 225 230 235 240
 Gly Pro His Gly Ala Ile Asn Val Ser Val Ser Glu Lys Ala Ile Asp
 245 250 255
 Gln Ser Val Glu Tyr Val Arg Pro Leu Gly Lys Val Val Leu Val Gly
 260 265 270
 Leu Pro Ala His Ala Lys Val Thr Ala Pro Val Phe Asp Ala Val Val
 275 280 285
 Lys Ser Ile Glu Ile Lys Gly Ser Tyr Val Gly Asn Arg Lys Asp Thr
 290 295 300
 Ala Glu Ala Ile Asp Phe Phe Ser Arg Gly Leu Ile Lys Cys Pro Ile
 305 310 315 320
 Lys Ile Val Gly Leu Ser Asp Leu Pro Glu Val Phe Lys Leu Met Glu
 325 330 335
 Glu Gly Lys Ile Leu Gly Arg Tyr Val Leu Asp Thr Ser Lys
 340 345 350

<210> 54
 <211> 174
 <212> PRT
 <213> Canis familiaris (Dog)

<400> 54
 Met Lys Thr Leu Leu Leu Thr Ile Gly Phe Ser Leu Ile Ala Ile Leu
 1 5 10 15

Gln	Ala	Gln	Asp	Thr	Pro	Ala	Leu	Gly	Lys	Asp	Thr	Val	Ala	Val	Ser	
			20					25					30			
Gly	Lys	Trp	Tyr	Leu	Lys	Ala	Met	Thr	Ala	Asp	Gln	Glu	Val	Pro	Glu	
		35					40					45				
Lys	Pro	Asp	Ser	Val	Thr	Pro	Met	Ile	Leu	Lys	Ala	Gln	Lys	Gly	Gly	
	50					55					60					
Asn	Leu	Glu	Ala	Lys	Ile	Thr	Met	Leu	Thr	Asn	Gly	Gln	Cys	Gln	Asn	
65					70					75					80	
Ile	Thr	Val	Val	Leu	His	Lys	Thr	Ser	Glu	Pro	Gly	Lys	Tyr	Thr	Ala	
				85					90					95		
Tyr	Glu	Gly	Gln	Arg	Val	Val	Phe	Ile	Gln	Pro	Ser	Pro	Val	Arg	Asp	
			100					105					110			
His	Tyr	Ile	Leu	Tyr	Cys	Glu	Gly	Glu	Leu	His	Gly	Arg	Gln	Ile	Arg	
		115					120					125				
Met	Ala	Lys	Leu	Leu	Gly	Arg	Asp	Pro	Glu	Gln	Ser	Gln	Glu	Ala	Leu	
	130					135					140					
Glu	Asp	Phe	Arg	Glu	Phe	Ser	Arg	Ala	Lys	Gly	Leu	Asn	Gln	Glu	Ile	
145					150					155					160	
Leu	Glu	Leu	Ala	Gln	Ser	Glu	Thr	Cys	Ser	Pro	Gly	Gly	Gln			
				165					170							

<210> 55
 <211> 180
 <212> PRT
 <213> Canis familiaris (Dog)

Met	Gln	Leu	Leu	Leu	Leu	Thr	Val	Gly	Leu	Ala	Leu	Ile	Cys	Gly	Leu	
1				5					10					15		
Gln	Ala	Gln	Glu	Gly	Asn	His	Glu	Glu	Pro	Gln	Gly	Gly	Leu	Glu	Glu	
		20						25					30			
Leu	Ser	Gly	Arg	Trp	His	Ser	Val	Ala	Leu	Ala	Ser	Asn	Lys	Ser	Asp	
		35					40					45				
Leu	Ile	Lys	Pro	Trp	Gly	His	Phe	Arg	Val	Phe	Ile	His	Ser	Met	Ser	
	50					55				60						
Ala	Lys	Asp	Gly	Asn	Leu	His	Gly	Asp	Ile	Leu	Ile	Pro	Gln	Asp	Gly	
65				70					75					80		
Gln	Cys	Glu	Lys	Val	Ser	Leu	Thr	Ala	Phe	Lys	Thr	Ala	Thr	Ser	Asn	
				85				90					95			
Lys	Phe	Asp	Leu	Glu	Tyr	Trp	Gly	His	Asn	Asp	Leu	Tyr	Leu	Ala	Glu	
			100				105						110			
Val	Asp	Pro	Lys	Ser	Tyr	Leu	Ile	Leu	Tyr	Met	Ile	Asn	Gln	Tyr	Asn	
		115					120					125				
Asp	Asp	Thr	Ser	Leu	Val	Ala	His	Leu	Met	Val	Arg	Asp	Leu	Ser	Arg	
	130					135					140					
Gln	Gln	Asp	Phe	Leu	Pro	Ala	Phe	Glu	Ser	Val	Cys	Glu	Asp	Ile	Gly	
145				150						155				160		
Leu	His	Lys	Asp	Gln	Ile	Val	Val	Leu	Ser	Asp	Asp	Asp	Arg	Cys	Gln	
			165						170					175		
Gly	Ser	Arg	Asp													
			180													

<210> 56
 <211> 159
 <212> PRT
 <213> Carpinus betulus (Hornbeam)

<400> 56
 Gly Val Phe Asn Tyr Glu Ala Glu Thr Pro Ser Val Ile Pro Ala Ala

1				5					10					15		
Arg	Leu	Phe	Lys	Ser	Tyr	Val	Leu	Asp	Gly	Asp	Lys	Leu	Ile	Pro	Lys	
			20					25					30			
Val	Ala	Pro	Gln	Val	Ile	Ser	Ser	Val	Glu	Asn	Val	Gly	Gly	Asn	Gly	
		35					40					45				
Gly	Pro	Gly	Thr	Ile	Lys	Asn	Ile	Thr	Phe	Ala	Glu	Gly	Ile	Pro	Phe	
	50					55					60					
Lys	Phe	Val	Lys	Glu	Arg	Val	Asp	Glu	Val	Asp	Asn	Ala	Asn	Phe	Lys	
65					70					75					80	
Tyr	Asn	Tyr	Thr	Val	Ile	Glu	Gly	Asp	Val	Leu	Gly	Asp	Lys	Leu	Glu	
			85					90						95		
Lys	Val	Ser	His	Glu	Leu	Lys	Ile	Val	Ala	Ala	Pro	Gly	Gly	Gly	Ser	
			100					105					110			
Ile	Val	Lys	Ile	Ser	Ser	Lys	Phe	His	Ala	Lys	Gly	Tyr	His	Glu	Val	
		115					120					125				
Asn	Ala	Glu	Lys	Met	Lys	Gly	Ala	Lys	Glu	Met	Ala	Glu	Lys	Leu	Leu	
	130					135					140					
Arg	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Thr	Ala	Glu	Tyr	Asn		
145					150					155						

<210> 57
 <211> 159
 <212> PRT
 <213> Carpinus betulus (Hornbeam)

<400> 57																
Gly	Val	Phe	Asn	Tyr	Glu	Ala	Glu	Thr	Thr	Ser	Val	Ile	Pro	Ala	Ala	
1				5					10					15		
Arg	Leu	Phe	Lys	Ala	Phe	Ile	Leu	Asp	Gly	Asn	Lys	Leu	Ile	Pro	Lys	
			20					25					30			
Val	Ser	Pro	Gln	Ala	Val	Ser	Ser	Val	Glu	Asn	Val	Glu	Gly	Asn	Gly	
		35					40					45				
Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Thr	Phe	Ser	Glu	Gly	Ser	Pro	Val	
	50					55					60					
Lys	Tyr	Val	Lys	Glu	Arg	Val	Glu	Glu	Ile	Asp	His	Thr	Asn	Phe	Lys	
65					70					75					80	
Tyr	Asn	Tyr	Thr	Val	Ile	Glu	Gly	Asp	Val	Leu	Gly	Asp	Lys	Leu	Glu	
			85					90						95		
Lys	Val	Ser	His	Glu	Leu	Lys	Ile	Val	Ala	Ala	Pro	Gly	Gly	Gly	Ser	
			100					105					110			
Ile	Val	Lys	Ile	Ser	Ser	Lys	Phe	His	Ala	Lys	Gly	Tyr	His	Glu	Val	
		115					120					125				
Asn	Ala	Glu	Glu	Met	Lys	Gly	Ala	Lys	Glu	Met	Ala	Glu	Lys	Leu	Leu	
	130					135					140					
Arg	Ala	Val	Glu	Ser	Tyr	Leu	Leu	Ala	His	Thr	Ala	Glu	Tyr	Asn		
145					150					155						

<210> 58
 <211> 375
 <212> PRT
 <213> Chamaecyparis obtusa (Japanese cypress)

<400> 58																
Met	Ala	Ser	Cys	Thr	Leu	Leu	Ala	Val	Leu	Val	Phe	Leu	Cys	Ala	Ile	
1				5					10					15		
Val	Ser	Cys	Phe	Ser	Asp	Asn	Pro	Ile	Asp	Ser	Cys	Trp	Arg	Gly	Asp	
			20					25					30			
Ala	Asn	Trp	Asp	Gln	Asn	Arg	Met	Lys	Leu	Ala	Asp	Cys	Ala	Val	Gly	
		35					40					45				

Phe	Gly	Ser	Ser	Ala	Met	Gly	Gly	Lys	Gly	Gly	Ala	Phe	Tyr	Thr	Val
50						55					60				
Thr	Ser	Ser	Asp	Asp	Asp	Pro	Val	Asn	Pro	Ala	Pro	Gly	Thr	Leu	Arg
65					70					75					80
Tyr	Gly	Ala	Thr	Arg	Glu	Arg	Ser	Leu	Trp	Ile	Ile	Phe	Ser	Lys	Asn
				85					90					95	
Leu	Asn	Ile	Lys	Leu	Asn	Met	Pro	Leu	Tyr	Ile	Ala	Gly	Asn	Lys	Thr
			100					105					110		
Ile	Asp	Gly	Arg	Gly	Ala	Glu	Val	His	Ile	Gly	Asn	Gly	Gly	Pro	Cys
		115				120					125				
Leu	Phe	Met	Arg	Thr	Val	Ser	His	Val	Ile	Leu	His	Gly	Leu	Asn	Ile
	130					135					140				
His	Gly	Cys	Asn	Thr	Ser	Val	Ser	Gly	Asn	Val	Leu	Ile	Ser	Glu	Ala
145					150					155					160
Ser	Gly	Val	Val	Pro	Val	His	Ala	Gln	Asp	Gly	Asp	Ala	Ile	Thr	Met
				165					170					175	
Arg	Asn	Val	Thr	Asp	Val	Trp	Ile	Asp	His	Asn	Ser	Leu	Ser	Asp	Ser
			180					185					190		
Ser	Asp	Gly	Leu	Val	Asp	Val	Thr	Leu	Ala	Ser	Thr	Gly	Val	Thr	Ile
		195					200					205			
Ser	Asn	Asn	His	Phe	Phe	Asn	His	His	Lys	Val	Met	Leu	Leu	Gly	His
	210					215					220				
Ser	Asp	Ile	Tyr	Ser	Asp	Asp	Lys	Ser	Met	Lys	Val	Thr	Val	Ala	Phe
225					230					235					240
Asn	Gln	Phe	Gly	Pro	Asn	Ala	Gly	Gln	Arg	Met	Pro	Arg	Ala	Arg	Tyr
				245					250					255	
Gly	Leu	Ile	His	Val	Ala	Asn	Asn	Asn	Tyr	Asp	Pro	Trp	Ser	Ile	Tyr
			260					265					270		
Ala	Ile	Gly	Gly	Ser	Ser	Asn	Pro	Thr	Ile	Leu	Ser	Glu	Gly	Asn	Ser
		275					280					285			
Phe	Thr	Ala	Pro	Asn	Asp	Ser	Asp	Lys	Lys	Glu	Val	Thr	Arg	Arg	Val
	290					295					300				
Gly	Cys	Glu	Ser	Pro	Ser	Thr	Cys	Ala	Asn	Trp	Val	Trp	Arg	Ser	Thr
305					310					315					320
Gln	Asp	Ser	Phe	Asn	Asn	Gly	Ala	Tyr	Phe	Val	Ser	Ser	Gly	Lys	Asn
				325					330					335	
Glu	Gly	Thr	Asn	Ile	Tyr	Asn	Asn	Asn	Glu	Ala	Phe	Lys	Val	Glu	Asn
			340					345					350		
Gly	Ser	Ala	Ala	Pro	Gln	Leu	Thr	Lys	Asn	Ala	Gly	Val	Leu	Thr	Cys
		355					360					365			
Ile	Leu	Ser	Lys	Pro	Cys	Ser									
	370					375									

<210> 59

<211> 496

<212> PRT

<213> Cladosporium herbarum

<400> 59

Met	Thr	Ser	Val	Gln	Leu	Glu	Thr	Pro	His	Ser	Gly	Lys	Tyr	Glu	Gln
1				5					10					15	
Pro	Thr	Gly	Leu	Phe	Ile	Asn	Asn	Glu	Phe	Val	Lys	Gly	Gln	Glu	Gly
			20					25					30		
Lys	Thr	Phe	Asp	Val	Ile	Asn	Pro	Ser	Asp	Glu	Ser	Val	Ile	Thr	Gln
		35					40					45			
Val	His	Glu	Ala	Thr	Glu	Lys	Asp	Val	Asp	Ile	Ala	Val	Ala	Ala	Ala
	50					55					60				
Arg	Gln	Ala	Phe	Glu	Gly	Ser	Trp	Arg	Leu	Glu	Thr	Pro	Glu	Asn	Arg
65					70					75					80
Gly	Lys	Leu	Leu	Asn	Asn	Leu	Ala	Asn	Leu	Phe	Glu	Lys	Asn	Thr	Asp

				85					90					95			
Leu	Leu	Ala	Ala	Val	Glu	Ser	Leu	Asp	Asn	Gly	Lys	Ala	Thr	Ser	Met		
			100					105					110				
Ala	Arg	Val	Thr	Ser	Ala	Cys	Ala	Ser	Gly	Cys	Leu	Arg	Tyr	Tyr	Gly		
		115					120					125					
Gly	Trp	Ala	Asp	Lys	Ile	Thr	Gly	Lys	Val	Ile	Asp	Thr	Thr	Pro	Asp		
	130					135					140						
Thr	Phe	Asn	Tyr	Val	Lys	Lys	Glu	Pro	Ile	Gly	Val	Cys	Arg	Ser	Asp		
145				150						155					160		
His	Ser	Leu	Glu	Leu	Pro	Leu	Leu	Met	Trp	Ala	Trp	Lys	Ile	Gly	Pro		
			165					170						175			
Ala	Ile	Ala	Cys	Gly	Asn	Thr	Val	Val	Leu	Lys	Thr	Ala	Glu	Gln	Thr		
		180						185					190				
Pro	Leu	Gly	Gly	Leu	Val	Ala	Ala	Ser	Leu	Val	Lys	Glu	Ala	Gly	Phe		
	195						200					205					
Pro	Pro	Gly	Val	Ile	Asn	Val	Ile	Ser	Gly	Phe	Gly	Lys	Val	Ala	Gly		
	210				215						220						
Ala	Ala	Leu	Ser	Ser	His	Met	Asp	Val	Asp	Lys	Val	Ala	Phe	Thr	Gly		
225					230					235					240		
Ser	Thr	Val	Val	Gly	Arg	Thr	Ile	Leu	Lys	Ala	Ala	Ala	Ser	Ser	Asn		
			245						250					255			
Leu	Lys	Lys	Val	Thr	Leu	Glu	Leu	Gly	Gly	Lys	Ser	Pro	Asn	Ile	Val		
		260						265					270				
Phe	Glu	Asp	Ala	Asp	Ile	Asp	Asn	Ala	Ile	Ser	Trp	Val	Asn	Phe	Gly		
	275						280					285					
Ile	Phe	Phe	Asn	His	Gly	Gln	Cys	Cys	Cys	Ala	Gly	Ser	Arg	Val	Tyr		
	290				295					300							
Val	Gln	Glu	Ser	Ile	Tyr	Asp	Lys	Phe	Val	Gln	Lys	Phe	Lys	Glu	Arg		
305					310					315					320		
Ala	Gln	Lys	Asn	Val	Val	Gly	Asp	Pro	Phe	Ala	Ala	Asp	Thr	Phe	Gln		
			325						330					335			
Gly	Pro	Gln	Val	Ser	Lys	Val	Gln	Phe	Asp	Arg	Ile	Met	Glu	Tyr	Ile		
		340						345					350				
Gln	Ala	Gly	Lys	Asp	Ala	Gly	Ala	Thr	Val	Glu	Thr	Gly	Gly	Ser	Arg		
	355					360						365					
Lys	Gly	Asp	Lys	Gly	Tyr	Phe	Ile	Glu	Pro	Thr	Ile	Phe	Ser	Asn	Val		
	370					375					380						
Thr	Glu	Asp	Met	Lys	Ile	Val	Lys	Glu	Glu	Ile	Phe	Gly	Pro	Val	Cys		
385					390					395					400		
Ser	Ile	Ala	Lys	Phe	Lys	Thr	Lys	Glu	Asp	Ala	Ile	Lys	Leu	Gly	Asn		
			405						410					415			
Ala	Ser	Thr	Tyr	Gly	Leu	Ala	Ala	Ala	Val	His	Thr	Lys	Asn	Leu	Asn		
		420						425					430				
Thr	Ala	Ile	Glu	Val	Ser	Asn	Ala	Leu	Lys	Ala	Gly	Thr	Val	Trp	Val		
	435						440					445					
Asn	Thr	Tyr	Asn	Thr	Leu	His	His	Gln	Met	Pro	Phe	Gly	Gly	Tyr	Lys		
	450				455						460						
Glu	Ser	Gly	Ile	Gly	Arg	Glu	Leu	Gly	Glu	Asp	Ala	Leu	Ala	Asn	Tyr		
465					470					475					480		
Thr	Gln	Thr	Lys	Thr	Val	Ser	Ile	Arg	Leu	Gly	Asp	Ala	Leu	Phe	Gly		
			485						490					495			

<210> 60
 <211> 111
 <212> PRT
 <213> Cladosporium herbarum

<400> 60
 Met Lys Tyr Met Ala Ala Tyr Leu Leu Leu Gly Leu Ala Gly Asn Ser
 1 5 10 15

Ser	Pro	Ser	Ala	Glu	Asp	Ile	Lys	Thr	Val	Leu	Ser	Ser	Val	Gly	Ile
			20					25					30		
Asp	Ala	Asp	Glu	Glu	Arg	Leu	Ser	Ser	Leu	Leu	Lys	Glu	Leu	Glu	Gly
		35					40					45			
Lys	Asp	Ile	Asn	Glu	Leu	Ile	Ser	Ser	Gly	Ser	Gln	Lys	Leu	Ala	Ser
	50					55					60				
Val	Pro	Ser	Gly	Gly	Ser	Gly	Ala	Ala	Pro	Ser	Ala	Gly	Gly	Ala	Ala
65					70					75					80
Ala	Ala	Gly	Gly	Ala	Thr	Glu	Ala	Ala	Pro	Glu	Ala	Ala	Lys	Glu	Glu
				85					90					95	
Glu	Lys	Glu	Glu	Ser	Asp	Asp	Asp	Met	Gly	Phe	Gly	Leu	Phe	Asp	
			100					105						110	

<210> 61
 <211> 643
 <212> PRT
 <213> Cladosporium herbarum

Met	Ala	Pro	Ala	Ile	Gly	Ile	Asp	Leu	Gly	Thr	Thr	Tyr	Ser	Cys	Val
1				5					10					15	
Gly	Ile	Tyr	Arg	Asp	Asp	Arg	Ile	Glu	Ile	Ile	Ala	Asn	Asp	Gln	Gly
			20					25					30		
Asn	Arg	Thr	Thr	Pro	Ser	Phe	Val	Ala	Phe	Thr	Asp	Thr	Glu	Arg	Leu
		35					40					45			
Ile	Gly	Asp	Ser	Ala	Lys	Asn	Gln	Val	Ala	Ile	Asn	Pro	His	Asn	Thr
	50					55					60				
Val	Phe	Asp	Ala	Lys	Arg	Leu	Ile	Gly	Arg	Lys	Phe	Gln	Asp	Ala	Glu
65					70					75					80
Val	Gln	Ala	Asp	Met	Lys	His	Phe	Pro	Phe	Lys	Val	Ile	Glu	Lys	Ala
				85					90					95	
Gly	Lys	Pro	Val	Thr	Gln	Val	Glu	Phe	Lys	Gly	Glu	Thr	Lys	Asp	Phe
			100					105					110		
Thr	Pro	Glu	Glu	Ile	Ser	Ser	Met	Ile	Leu	Thr	Lys	Met	Arg	Glu	Thr
			115				120					125			
Ala	Glu	Ser	Tyr	Leu	Gly	Gly	Thr	Val	Asn	Asn	Ala	Val	Ile	Thr	Val
						135					140				
Pro	Ala	Tyr	Phe	Asn	Asp	Ser	Gln	Arg	Gln	Ala	Thr	Lys	Asp	Ala	Gly
145					150					155					160
Leu	Ile	Ala	Gly	Leu	Asn	Val	Leu	Arg	Ile	Ile	Asn	Glu	Pro	Thr	Ala
				165					170					175	
Ala	Ala	Ile	Ala	Tyr	Gly	Leu	Asp	Lys	Lys	Gln	Glu	Gly	Glu	Lys	Asn
			180					185					190		
Val	Leu	Ile	Phe	Asp	Leu	Gly	Gly	Gly	Thr	Phe	Asp	Val	Ser	Phe	Leu
		195					200					205			
Thr	Ile	Glu	Glu	Gly	Ile	Phe	Glu	Val	Lys	Ser	Thr	Ala	Gly	Asp	Thr
					215						220				
His	Leu	Gly	Gly	Glu	Asp	Phe	Asp	Asn	Arg	Leu	Val	Asn	His	Phe	Ser
225					230					235					240
Asn	Glu	Phe	Lys	Arg	Lys	His	Lys	Lys	Asp	Leu	Ser	Asp	Asn	Ala	Arg
				245					250					255	
Ala	Leu	Arg	Arg	Leu	Arg	Thr	Ala	Cys	Glu	Arg	Ala	Lys	Arg	Thr	Leu
			260					265					270		
Ser	Ser	Ser	Ala	Gln	Thr	Ser	Ile	Glu	Ile	Asp	Ser	Leu	Phe	Glu	Gly
		275					280					285			
Ile	Asp	Phe	Phe	Thr	Ser	Asn	Thr	Arg	Ala	Arg	Phe	Glu	Glu	Val	Gly
	290					295					300				
Gln	Asp	Leu	Phe	Arg	Gly	Asn	Met	Glu	Pro	Gly	Glu	Arg	Thr	Leu	Arg
305					310					315					320
Asp	Asp	Lys	Ile	Asp	Lys	Ser	Ser	Val	His	Glu	Ile	Val	Leu	Gly	Gly

				325					330				335		
Gly	Ser	Thr	Arg	Ile	Pro	Lys	Val	Gln	Lys	Leu	Val	Ser	Asp	Phe	Phe
			340					345					350		
Asn	Gly	Lys	Glu	Pro	Cys	Lys	Ser	Ile	Asn	Pro	Asp	Glu	Ala	Val	Ala
		355					360					365			
Tyr	Gly	Ala	Ala	Val	Gln	Ala	Ala	Ile	Leu	Ser	Gly	Asp	Thr	Ser	Ser
	370				375						380				
Lys	Ser	Thr	Lys	Glu	Ile	Leu	Leu	Leu	Asp	Val	Ala	Pro	Leu	Ser	Leu
385				390					395						400
Gly	Ile	Glu	Thr	Ala	Gly	Gly	Val	Met	Thr	Ala	Leu	Ile	Lys	Arg	Asn
			405					410						415	
Thr	Thr	Ile	Pro	Thr	Lys	Lys	Ser	Glu	Thr	Phe	Ser	Thr	Phe	Ser	Asp
		420					425						430		
Asn	Gln	Pro	Gly	Val	Leu	Ile	Gln	Val	Phe	Glu	Gly	Glu	Arg	Ala	Arg
	435						440					445			
Thr	Lys	Asp	Ile	Asn	Leu	Met	Gly	Lys	Phe	Glu	Leu	Ser	Gly	Ile	Arg
	450				455						460				
Pro	Ala	Pro	Arg	Gly	Val	Pro	Gln	Ile	Glu	Val	Thr	Phe	Asp	Leu	Asp
465				470					475						480
Ala	Asn	Gly	Ile	Met	Asn	Val	Ser	Ala	Leu	Glu	Lys	Gly	Thr	Gly	Lys
			485				490							495	
Thr	Asn	Lys	Ile	Val	Ile	Thr	Asn	Asp	Lys	Gly	Arg	Leu	Ser	Lys	Glu
	500						505						510		
Glu	Ile	Glu	Arg	Met	Leu	Ala	Asp	Ala	Glu	Lys	Tyr	Lys	Glu	Glu	Asp
	515						520					525			
Glu	Ala	Glu	Ala	Gly	Arg	Ile	Gln	Ala	Lys	Asn	Gly	Leu	Glu	Ser	Tyr
	530			535							540				
Ala	Tyr	Ser	Leu	Lys	Asn	Thr	Val	Ser	Asp	Pro	Lys	Val	Glu	Glu	Lys
545				550					555						560
Leu	Ser	Ala	Glu	Asp	Lys	Glu	Thr	Leu	Thr	Gly	Ala	Ile	Asp	Lys	Thr
			565				570							575	
Val	Ala	Trp	Ile	Asp	Glu	Asn	Gln	Thr	Ala	Thr	Lys	Glu	Glu	Tyr	Glu
		580					585						590		
Ala	Glu	Gln	Lys	Gln	Leu	Glu	Ser	Val	Ala	Asn	Pro	Val	Met	Met	Lys
	595					600						605			
Ile	Tyr	Gly	Ala	Glu	Gly	Gly	Ala	Pro	Gly	Gly	Met	Pro	Gly	Gln	Gly
	610				615						620				
Ala	Gly	Ala	Pro	Pro	Pro	Gly	Ala	Gly	Asp	Asp	Gly	Pro	Thr	Val	Glu
625					630				635						640
Glu	Val	Asp													

<210> 62
 <211> 112
 <212> PRT
 <213> Cladosporium herbarum

<400> 62
 Met Lys Tyr Leu Ala Ala Phe Leu Leu Leu Gly Leu Ala Gly Asn Ser
 1 5 10 15
 Ser Pro Ser Ala Glu Asp Ile Lys Thr Val Leu Ser Ser Val Gly Ile
 20 25 30
 Asp Ala Asp Glu Glu Arg Leu Ser Ser Leu Leu Lys Glu Leu Glu Gly
 35 40 45
 Lys Asp Ile Asn Glu Leu Ile Ser Ser Gly Ser Glu Lys Leu Ala Ser
 50 55 60
 Val Pro Ser Gly Gly Ala Gly Ala Ala Ser Ala Gly Gly Ala Ala Ala
 65 70 75 80
 Ala Gly Gly Ala Ala Glu Ala Ala Pro Glu Ala Glu Arg Ala Glu Glu
 85 90 95

Glu Lys Glu Glu Ser Asp Asp Asp Met Gly Phe Gly Leu Phe Asp Glx
 100 105 110

<210> 63
 <211> 204
 <212> PRT
 <213> Cladosporium herbarum

<400> 63
 Met Ala Pro Lys Ile Ala Ile Ile Phe Tyr Ser Thr Trp Gly His Val
 1 5 10 15
 Gln Thr Leu Ala Glu Ala Glu Ala Lys Gly Ile Arg Glu Ala Gly Gly
 20 25 30
 Ser Val Asp Leu Tyr Arg Val Pro Glu Thr Leu Thr Gln Glu Val Leu
 35 40 45
 Thr Lys Met His Ala Pro Pro Lys Asp Asp Ser Ile Pro Glu Ile Thr
 50 55 60
 Asp Pro Phe Ile Leu Glu Gln Tyr Asp Arg Phe Pro His Gly His Pro
 65 70 75 80
 Thr Arg Tyr Gly Asn Phe Pro Ala Gln Trp Arg Thr Phe Trp Asp Arg
 85 90 95
 Thr Gly Gly Gln Trp Gln Thr Gly Ala Phe Trp Gly Lys Tyr Ala Gly
 100 105 110
 Leu Phe Ile Ser Thr Gly Thr Gln Gly Gly Gly Gln Glu Ser Thr Ala
 115 120 125
 Leu Ala Ala Met Ser Thr Leu Ser His His Gly Ile Ile Tyr Val Pro
 130 135 140
 Leu Gly Tyr Lys Thr Thr Phe His Leu Leu Gly Asp Asn Ser Glu Val
 145 150 155 160
 Arg Gly Ala Ala Val Trp Gly Ala Gly Thr Phe Ser Gly Gly Asp Gly
 165 170 175
 Ser Arg Gln Pro Ser Gln Lys Glu Leu Glu Leu Thr Ala Gln Gly Lys
 180 185 190
 Ala Phe Tyr Glu Ala Val Ala Lys Val Asn Phe Gln
 195 200

<210> 64
 <211> 440
 <212> PRT
 <213> Cladosporium herbarum

<400> 64
 Met Pro Ile Ser Lys Ile His Ser Arg Tyr Val Tyr Asp Ser Arg Gly
 1 5 10 15
 Asn Pro Thr Val Glu Val Asp Ile Val Thr Glu Thr Gly Leu His Arg
 20 25 30
 Ala Ile Val Pro Ser Gly Ala Ser Thr Gly Ser His Glu Ala Cys Glu
 35 40 45
 Leu Arg Asp Gly Asp Lys Ser Lys Trp Ala Gly Lys Gly Val Thr Lys
 50 55 60
 Ala Val Ala Asn Val Asn Glu Ile Ile Ala Pro Ala Leu Ile Lys Glu
 65 70 75 80
 Asn Leu Asp Val Lys Asp Gln Ala Ala Val Asp Ala Phe Leu Asn Lys
 85 90 95
 Leu Asp Gly Thr Thr Asn Lys Thr Lys Ile Gly Ala Asn Ala Ile Leu
 100 105 110
 Gly Val Ser Met Ala Val Ala Lys Ala Ala Ala Ala Glu Lys Arg Val
 115 120 125
 Pro Leu Tyr Ala His Ile Ser Asp Leu Ser Gly Thr Lys Lys Pro Phe

130		135		140
Val Leu Pro Val Pro Phe Met Asn Val Val Asn Gly Gly Ser His Ala				
145		150		155
Gly Gly Arg Leu Ala Phe Gln Glu Phe Met Ile Val Pro Ser Gly Ala				160
	165		170	175
Pro Ser Phe Thr Glu Ala Met Arg Gln Gly Ala Glu Val Tyr Gln Lys				
	180		185	190
Leu Lys Ser Leu Thr Lys Lys Arg Tyr Gly Gln Ser Ala Gly Asn Val				
	195	200		205
Gly Asp Glu Gly Gly Val Ala Pro Asp Ile Gln Thr Ala Glu Glu Ala				
	210	215		220
Leu Asp Leu Ile Thr Asp Ala Ile Glu Glu Ala Gly Tyr Thr Gly Gln				
225		230		235
Ile Lys Ile Ala Met Asp Val Ala Ser Ser Glu Phe Tyr Lys Ala Asp				
	245		250	255
Glu Lys Lys Tyr Asp Leu Asp Phe Lys Asn Pro Asp Ser Asp Lys Ser				
	260	265		270
Lys Trp Ile Thr Tyr Glu Gln Leu Ala Asp Gln Tyr Lys Gln Leu Ala				
	275	280		285
Ala Lys Tyr Pro Ile Val Ser Ile Glu Asp Pro Phe Ala Glu Asp Asp				
	290	295		300
Trp Glu Ala Trp Ser Tyr Phe Tyr Lys Thr Ser Gly Ser Asp Phe Gln				
305		310		315
Ile Val Gly Asp Asp Leu Thr Val Thr Asn Pro Glu Phe Ile Lys Lys				
	325		330	335
Ala Ile Glu Thr Lys Ala Cys Asn Ala Leu Leu Leu Lys Val Asn Gln				
	340	345		350
Ile Gly Thr Ile Thr Glu Ala Ile Asn Ala Ala Lys Asp Ser Phe Ala				
	355	360		365
Ala Gly Trp Gly Val Met Val Ser His Arg Ser Gly Glu Thr Glu Asp				
	370	375		380
Val Thr Ile Ala Asp Ile Val Val Gly Leu Arg Ala Gly Gln Ile Lys				
385		390		395
Thr Gly Ala Pro Ala Arg Ser Glu Arg Leu Ala Lys Leu Asn Gln Ile				
	405		410	415
Leu Arg Ile Glu Glu Glu Leu Gly Asp Lys Ala Val Tyr Ala Gly Asp				
	420	425		430
Asn Phe Arg Thr Ala Ile Asn Leu				
	435	440		

<210> 65

<211> 110

<212> PRT

<213> Cladosporium herbarum

<400> 65

Met Ser Ala Ala Glu Leu Ala Ser Ser Tyr Ala Ala Leu Ile Leu Ala	
1	5
Asp Glu Gly Leu Glu Ile Thr Ala Asp Lys Leu Gln Ala Leu Ile Ser	
	20
Ala Ala Lys Val Pro Glu Ile Glu Pro Ile Trp Thr Ser Leu Phe Ala	
	35
Lys Ala Leu Glu Gly Lys Asp Val Lys Asp Leu Leu Leu Asn Val Gly	
	50
Ser Gly Gly Gly Ala Ala Pro Ala Ala Gly Gly Ala Ala Ala Gly Gly	
65	70
Ala Ala Ala Val Leu Asp Ala Pro Ala Glu Glu Lys Ala Glu Glu Glu	
	85
Lys Glu Glu Ser Asp Asp Asp Met Gly Phe Gly Leu Phe Asp	
	100
	105
	110

<210> 66
 <211> 159
 <212> PRT
 <213> Corylus avellana (European hazel)

B1
Conf

<400> 66
 Gly Val Phe Asn Tyr Glu Val Glu Thr Pro Ser Val Ile Pro Ala Ala
 1 5 10 15
 Arg Leu Phe Lys Ser Tyr Val Leu Asp Gly Asp Lys Leu Ile Pro Lys
 20 25 30
 Val Ala Pro Gln Ala Ile Thr Ser Val Glu Asn Val Glu Gly Asn Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Asn Ile Thr Phe Gly Glu Gly Ser Arg Tyr
 50 55 60
 Lys Tyr Val Lys Glu Arg Val Asp Glu Val Asp Asn Thr Asn Phe Thr
 65 70 75 80
 Tyr Ser Tyr Thr Val Ile Glu Gly Asp Val Leu Gly Asp Lys Leu Glu
 85 90 95
 Lys Val Cys His Glu Leu Lys Ile Val Ala Ala Pro Gly Gly Gly Ser
 100 105 110
 Ile Leu Lys Ile Ser Ser Lys Phe His Ala Lys Gly Asp His Glu Ile
 115 120 125
 Asn Ala Glu Glu Met Lys Gly Ala Lys Glu Met Ala Glu Lys Leu Leu
 130 135 140
 Arg Ala Val Glu Thr Tyr Leu Leu Ala His Ser Ala Glu Tyr Asn
 145 150 155

<210> 67
 <211> 346
 <212> PRT
 <213> Cupressus arizonica

<400> 67
 Asp Asn Pro Ile Asp Ser Cys Trp Arg Gly Asp Ser Asn Trp Asp Gln
 1 5 10 15
 Asn Arg Met Lys Leu Ala Asp Cys Val Val Gly Phe Gly Ser Ser Thr
 20 25 30
 Met Gly Gly Lys Gly Gly Glu Ile Tyr Thr Val Thr Ser Ser Glu Asp
 35 40 45
 Asn Pro Val Asn Pro Thr Pro Gly Thr Leu Arg Tyr Gly Ala Thr Arg
 50 55 60
 Glu Lys Ala Leu Trp Ile Ile Phe Ser Gln Asn Met Asn Ile Lys Leu
 65 70 75 80
 Gln Met Pro Leu Tyr Val Ala Gly Tyr Lys Thr Ile Asp Gly Arg Gly
 85 90 95
 Ala Val Val His Leu Gly Asn Gly Gly Pro Cys Leu Phe Met Arg Lys
 100 105 110
 Ala Ser His Val Ile Leu His Gly Leu His Ile His Gly Cys Asn Thr
 115 120 125
 Ser Val Leu Gly Asp Val Leu Val Ser Glu Ser Ile Gly Val Glu Pro
 130 135 140
 Val His Ala Gln Asp Gly Asp Ala Ile Thr Met Arg Asn Val Thr Asn
 145 150 155 160
 Ala Trp Ile Asp His Asn Ser Leu Ser Asp Cys Ser Asp Gly Leu Ile
 165 170 175
 Asp Val Thr Leu Gly Ser Thr Gly Ile Thr Ile Ser Asn Asn His Phe
 180 185 190
 Phe Asn His His Lys Val Met Leu Leu Gly His Asp Asp Thr Tyr Asp

		195					200				205				
Asp	Asp	Lys	Ser	Met	Lys	Val	Thr	Val	Ala	Phe	Asn	Gln	Phe	Gly	Pro
	210					215					220				
Asn	Ala	Gly	Gln	Arg	Met	Pro	Arg	Ala	Arg	Tyr	Gly	Leu	Val	His	Val
225					230					235					240
Ala	Asn	Asn	Asn	Tyr	Asp	Gln	Trp	Asn	Ile	Tyr	Ala	Ile	Gly	Gly	Ser
				245				250					255		
Ser	Asn	Pro	Thr	Ile	Leu	Ser	Glu	Gly	Asn	Ser	Phe	Thr	Ala	Pro	Asn
			260					265					270		
Glu	Ser	Tyr	Lys	Lys	Glu	Val	Thr	Lys	Arg	Ile	Gly	Cys	Glu	Thr	Thr
		275					280					285			
Ser	Ala	Cys	Ala	Asn	Trp	Val	Trp	Arg	Ser	Thr	Arg	Asp	Ala	Phe	Thr
	290					295					300				
Asn	Gly	Ala	Tyr	Phe	Val	Ser	Ser	Gly	Lys	Ala	Glu	Asp	Thr	Asn	Ile
305					310					315					320
Tyr	Asn	Ser	Asn	Glu	Ala	Phe	Lys	Val	Glu	Asn	Gly	Asn	Ala	Ala	Pro
				325					330					335	
Gln	Leu	Thr	Gln	Asn	Ala	Gly	Val	Val	Ala						
			340					345							

<210> 68

<211> 374

<212> PRT

<213> *Cryptomeria japonica* (Japanese cedar)

<400> 68

Met	Asp	Ser	Pro	Cys	Leu	Val	Ala	Leu	Leu	Val	Leu	Ser	Phe	Val	Ile
1				5				10					15		
Gly	Ser	Cys	Phe	Ser	Asp	Asn	Pro	Ile	Asp	Ser	Cys	Trp	Arg	Gly	Asp
			20				25					30			
Ser	Asn	Trp	Ala	Gln	Asn	Arg	Met	Lys	Leu	Ala	Asp	Cys	Ala	Val	Gly
		35					40					45			
Phe	Gly	Ser	Ser	Thr	Met	Gly	Gly	Lys	Gly	Gly	Asp	Leu	Tyr	Thr	Val
	50				55						60				
Thr	Asn	Ser	Asp	Asp	Asp	Pro	Val	Asn	Pro	Ala	Pro	Gly	Thr	Leu	Arg
65					70					75					80
Tyr	Gly	Ala	Thr	Arg	Asp	Arg	Pro	Leu	Trp	Ile	Ile	Phe	Ser	Gly	Asn
				85				90					95		
Met	Asn	Ile	Lys	Leu	Lys	Met	Pro	Met	Tyr	Ile	Ala	Gly	Tyr	Lys	Thr
			100					105					110		
Phe	Asp	Gly	Arg	Gly	Ala	Gln	Val	Tyr	Ile	Gly	Asn	Gly	Gly	Pro	Cys
		115					120					125			
Val	Phe	Ile	Lys	Arg	Val	Ser	Asn	Val	Ile	Ile	His	Gly	Leu	His	Leu
	130						135				140				
Tyr	Gly	Cys	Ser	Thr	Ser	Val	Leu	Gly	Asn	Val	Leu	Ile	Asn	Glu	Ser
145					150					155					160
Phe	Gly	Val	Glu	Pro	Val	His	Pro	Gln	Asp	Gly	Asp	Ala	Leu	Thr	Leu
				165					170					175	
Arg	Thr	Ala	Thr	Asn	Ile	Trp	Ile	Asp	His	Asn	Ser	Phe	Ser	Asn	Ser
			180					185					190		
Ser	Asp	Gly	Leu	Val	Asp	Val	Thr	Leu	Ser	Ser	Thr	Gly	Val	Thr	Ile
		195					200					205			
Ser	Asn	Asn	Leu	Phe	Phe	Asn	His	His	Lys	Val	Met	Leu	Leu	Gly	His
	210					215					220				
Asp	Asp	Ala	Tyr	Ser	Asp	Asp	Lys	Ser	Met	Lys	Val	Thr	Val	Ala	Phe
225					230					235					240
Asn	Gln	Phe	Gly	Pro	Asn	Cys	Gly	Gln	Arg	Met	Pro	Arg	Ala	Arg	Tyr
				245					250					255	
Gly	Leu	Val	His	Val	Ala	Asn	Asn	Asn	Tyr	Asp	Pro	Trp	Thr	Ile	Tyr
			260					265					270		

Ala Ile Gly Gly Ser Ser Asn Pro Thr Ile Leu Ser Glu Gly Asn Ser
 275 280 285
 Phe Thr Ala Pro Asn Glu Ser Tyr Lys Lys Gln Val Thr Ile Arg Ile
 290 295 300
 Gly Cys Lys Thr Ser Ser Ser Cys Ser Asn Trp Val Trp Gln Ser Thr
 305 310 315 320
 Gln Asp Val Phe Tyr Asn Gly Ala Tyr Phe Val Ser Ser Gly Lys Tyr
 325 330 335
 Glu Gly Gly Asn Ile Tyr Thr Lys Lys Glu Ala Phe Asn Val Glu Asn
 340 345 350
 Gly Asn Ala Thr Pro Gln Leu Thr Lys Asn Ala Gly Val Leu Thr Cys
 355 360 365
 Ser Leu Ser Lys Arg Cys
 370

<210> 69

<211> 514

<212> PRT

<213> *Cryptomeria japonica* (Japanese cedar)

<400> 69

Met Ala Met Lys Phe Ile Ala Pro Met Ala Phe Val Ala Met Gln Leu
 1 5 10 15
 Ile Ile Met Ala Ala Ala Glu Asp Gln Ser Ala Gln Ile Met Leu Asp
 20 25 30
 Ser Asp Ile Glu Gln Tyr Leu Arg Ser Asn Arg Ser Leu Arg Lys Val
 35 40 45
 Glu His Ser Arg His Asp Ala Ile Asn Ile Phe Asn Val Glu Lys Tyr
 50 55 60
 Gly Ala Val Gly Asp Gly Lys His Asp Cys Thr Glu Ala Phe Ser Thr
 65 70 75 80
 Ala Trp Gln Ala Ala Cys Lys Lys Pro Ser Ala Met Leu Leu Val Pro
 85 90 95
 Gly Asn Lys Lys Phe Val Val Asn Asn Leu Phe Phe Asn Gly Pro Cys
 100 105 110
 Gln Pro His Phe Thr Phe Lys Val Asp Gly Ile Ile Ala Ala Tyr Gln
 115 120 125
 Asn Pro Ala Ser Trp Lys Asn Asn Arg Ile Trp Leu Gln Phe Ala Lys
 130 135 140
 Leu Thr Gly Phe Thr Leu Met Gly Lys Gly Val Ile Asp Gly Gln Gly
 145 150 155 160
 Lys Gln Trp Trp Ala Gly Gln Cys Lys Trp Val Asn Gly Arg Glu Ile
 165 170 175
 Cys Asn Asp Arg Asp Arg Pro Thr Ala Ile Lys Phe Asp Phe Ser Thr
 180 185 190
 Gly Leu Ile Ile Gln Gly Leu Lys Leu Met Asn Ser Pro Glu Phe His
 195 200 205
 Leu Val Phe Gly Asn Cys Glu Gly Val Lys Ile Ile Gly Ile Ser Ile
 210 215 220
 Thr Ala Pro Arg Asp Ser Pro Asn Thr Asp Gly Ile Asp Ile Phe Ala
 225 230 235 240
 Ser Lys Asn Phe His Leu Gln Lys Asn Thr Ile Gly Thr Gly Asp Asp
 245 250 255
 Cys Val Ala Ile Gly Thr Gly Ser Ser Asn Ile Val Ile Glu Asp Leu
 260 265 270
 Ile Cys Gly Pro Gly His Gly Ile Ser Ile Gly Ser Leu Gly Arg Glu
 275 280 285
 Asn Ser Arg Ala Glu Val Ser Tyr Val His Val Asn Gly Ala Lys Phe
 290 295 300
 Ile Asp Thr Gln Asn Gly Leu Arg Ile Lys Thr Trp Gln Gly Gly Ser

Glu	Ala	Pro	Val	Thr	Phe	Thr	Val	Glu	Lys	Gly	Ser	Asp	Glu	Lys	Asn
1				5					10					15	
Leu	Ala	Leu	Ser	Ile	Lys	Tyr	Asn	Lys	Glu	Gly	Asp	Ser	Met	Ala	Glu
			20					25					30		
Val	Glu	Leu	Lys												
			35												

<210> 72
 <211> 154
 <212> PRT
 <213> *Daucus carota* (Carrot)

Met	Gly	Ala	Gln	Ser	His	Ser	Leu	Glu	Ile	Thr	Ser	Ser	Val	Ser	Ala
1				5					10					15	
Glu	Lys	Ile	Phe	Ser	Gly	Ile	Val	Leu	Asp	Val	Asp	Thr	Val	Ile	Pro
			20					25					30		
Lys	Ala	Ala	Pro	Gly	Ala	Tyr	Lys	Ser	Val	Glu	Val	Lys	Gly	Asp	Gly
		35					40					45			
Gly	Ala	Gly	Thr	Val	Arg	Ile	Ile	Thr	Leu	Pro	Glu	Gly	Ser	Pro	Ile
	50					55					60				
Thr	Ser	Met	Thr	Val	Arg	Thr	Asp	Ala	Val	Asn	Lys	Glu	Ala	Leu	Thr
65					70					75				80	
Tyr	Asp	Ser	Thr	Val	Ile	Asp	Gly	Asp	Ile	Leu	Leu	Gly	Phe	Ile	Glu
				85					90					95	
Ser	Ile	Glu	Thr	His	Leu	Val	Val	Val	Pro	Thr	Ala	Asp	Gly	Gly	Ser
			100					105					110		
Ile	Thr	Lys	Thr	Thr	Ala	Ile	Phe	His	Thr	Lys	Gly	Asp	Ala	Val	Val
		115					120					125			
Pro	Glu	Glu	Asn	Ile	Lys	Phe	Ala	Asp	Ala	Gln	Asn	Thr	Ala	Leu	Phe
	130					135					140				
Lys	Ala	Ile	Glu	Ala	Tyr	Leu	Ile	Ala	Asn						
145					150										

<210> 73
 <211> 321
 <212> PRT
 <213> *Dermatophagoides farinae* (House-dust mite)

Met	Lys	Phe	Val	Leu	Ala	Ile	Ala	Ser	Leu	Leu	Val	Leu	Ser	Thr	Val
1				5					10					15	
Tyr	Ala	Arg	Pro	Ala	Ser	Ile	Lys	Thr	Phe	Glu	Glu	Phe	Lys	Lys	Ala
			20					25					30		
Phe	Asn	Lys	Asn	Tyr	Ala	Thr	Val	Glu	Glu	Glu	Glu	Val	Ala	Arg	Lys
		35					40					45			
Asn	Phe	Leu	Glu	Ser	Leu	Lys	Tyr	Val	Glu	Ala	Asn	Lys	Gly	Ala	Ile
	50					55					60				
Asn	His	Leu	Ser	Asp	Leu	Ser	Leu	Asp	Glu	Phe	Lys	Asn	Arg	Tyr	Leu
65					70					75				80	
Met	Ser	Ala	Glu	Ala	Phe	Glu	Gln	Leu	Lys	Thr	Gln	Phe	Asp	Leu	Asn
				85					90					95	
Ala	Glu	Thr	Ser	Ala	Cys	Arg	Ile	Asn	Ser	Val	Asn	Val	Pro	Ser	Glu
			100					105					110		
Leu	Asp	Leu	Arg	Ser	Leu	Arg	Thr	Val	Thr	Pro	Ile	Arg	Met	Gln	Gly
		115					120					125			
Gly	Cys	Gly	Ser	Cys	Trp	Ala	Phe	Ser	Gly	Val	Ala	Ala	Thr	Glu	Ser
	130					135					140				
Ala	Tyr	Leu	Ala	Tyr	Arg	Asn	Thr	Ser	Leu	Asp	Leu	Ser	Glu	Gln	Glu

145					150					155					160
Leu	Val	Asp	Cys	Ala	Ser	Gln	His	Gly	Cys	His	Gly	Asp	Thr	Ile	Pro
				165					170					175	
Arg	Gly	Ile	Glu	Tyr	Ile	Gln	Gln	Asn	Gly	Val	Val	Glu	Glu	Arg	Ser
			180					185					190		
Tyr	Pro	Tyr	Val	Ala	Arg	Glu	Gln	Arg	Cys	Arg	Arg	Pro	Asn	Ser	Gln
	195					200						205			
His	Tyr	Gly	Ile	Ser	Asn	Tyr	Cys	Gln	Ile	Tyr	Pro	Pro	Asp	Val	Lys
	210					215				220					
Gln	Ile	Arg	Glu	Ala	Leu	Thr	Gln	Thr	His	Thr	Ala	Ile	Ala	Val	Ile
225					230				235					240	
Ile	Gly	Ile	Lys	Asp	Leu	Arg	Ala	Phe	Gln	His	Tyr	Asp	Gly	Arg	Thr
			245					250					255		
Ile	Ile	Gln	His	Asp	Asn	Gly	Tyr	Gln	Pro	Asn	Tyr	His	Ala	Val	Asn
			260					265					270		
Ile	Val	Gly	Tyr	Gly	Ser	Thr	Gln	Gly	Asp	Asp	Tyr	Trp	Ile	Val	Arg
		275					280					285			
Asn	Ser	Trp	Asp	Thr	Thr	Trp	Gly	Asp	Ser	Gly	Tyr	Gly	Tyr	Phe	Gln
	290					295					300				
Ala	Gly	Asn	Asn	Leu	Met	Met	Ile	Glu	Gln	Tyr	Pro	Tyr	Val	Val	Ile
305					310				315					320	
Met															

<210> 74

<211> 146

<212> PRT

<213> Dermatophagoides farinae (House-dust mite)

<400> 74

Met	Ile	Ser	Lys	Ile	Leu	Cys	Leu	Ser	Leu	Leu	Val	Ala	Ala	Val	Val
1				5					10					15	
Ala	Asp	Gln	Val	Asp	Val	Lys	Asp	Cys	Ala	Asn	Asn	Glu	Ile	Lys	Lys
			20					25				30			
Val	Met	Val	Asp	Gly	Cys	His	Gly	Ser	Asp	Pro	Cys	Ile	Ile	His	Arg
			35				40					45			
Gly	Lys	Pro	Phe	Thr	Leu	Glu	Ala	Leu	Phe	Asp	Ala	Asn	Gln	Asn	Thr
	50				55					60					
Lys	Thr	Ala	Lys	Ile	Glu	Ile	Lys	Ala	Ser	Leu	Asp	Gly	Leu	Glu	Ile
65				70					75					80	
Asp	Val	Pro	Gly	Ile	Asp	Thr	Asn	Ala	Cys	His	Phe	Met	Lys	Cys	Pro
				85				90					95		
Leu	Val	Lys	Gly	Gln	Gln	Tyr	Asp	Ile	Lys	Tyr	Thr	Trp	Asn	Val	Pro
			100					105					110		
Lys	Ile	Ala	Pro	Lys	Ser	Glu	Asn	Val	Val	Val	Thr	Val	Lys	Leu	Ile
	115					120						125			
Gly	Asp	Asn	Gly	Val	Leu	Ala	Cys	Ala	Ile	Ala	Thr	His	Gly	Lys	Ile
	130				135						140				
Arg	Asp														
145															

<210> 75

<211> 259

<212> PRT

<213> Dermatophagoides farinae (House-dust mite)

<400> 75

Met	Met	Ile	Leu	Thr	Ile	Val	Val	Leu	Leu	Ala	Ala	Asn	Ile	Leu	Ala
1					5				10					15	

Thr Pro Ile Leu Pro Ser Ser Pro Asn Ala Thr Ile Val Gly Gly Val
 20 25 30
 Lys Ala Gln Ala Gly Asp Cys Pro Tyr Gln Ile Ser Leu Gln Ser Ser
 35 40 45
 Ser His Phe Cys Gly Gly Ser Ile Leu Asp Glu Tyr Trp Ile Leu Thr
 50 55 60
 Ala Ala His Cys Val Asn Gly Gln Ser Ala Lys Lys Leu Ser Ile Arg
 65 70 75 80
 Tyr Asn Thr Leu Lys His Ala Ser Gly Gly Glu Lys Ile Gln Val Ala
 85 90 95
 Glu Ile Tyr Gln His Glu Asn Tyr Asp Ser Met Thr Ile Asp Asn Asp
 100 105 110
 Val Ala Leu Ile Lys Leu Lys Thr Pro Met Thr Leu Asp Gln Thr Asn
 115 120 125
 Ala Lys Pro Val Pro Leu Pro Ala Gln Gly Ser Asp Val Lys Val Gly
 130 135 140
 Asp Lys Ile Arg Val Ser Gly Trp Gly Tyr Leu Gln Glu Gly Ser Tyr
 145 150 155 160
 Ser Leu Pro Ser Glu Leu Gln Arg Val Asp Ile Asp Val Val Ser Arg
 165 170 175
 Glu Gln Cys Asp Gln Leu Tyr Ser Lys Ala Gly Ala Asp Val Ser Glu
 180 185 190
 Asn Met Ile Cys Gly Gly Asp Val Ala Asn Gly Gly Val Asp Ser Cys
 195 200 205
 Gln Gly Asp Ser Gly Gly Pro Val Val Asp Val Ala Thr Lys Gln Ile
 210 215 220
 Val Gly Ile Val Ser Trp Gly Tyr Gly Cys Ala Arg Lys Gly Tyr Pro
 225 230 235 240
 Gly Val Tyr Thr Arg Val Gly Asn Phe Val Asp Trp Ile Glu Ser Lys
 245 250 255
 Arg Ser Gln

<210> 76
 <211> 20
 <212> PRT
 <213> Dermatophagoides farinae (House-dust mite)

<400> 76
 Ala Val Gly Gly Gln Asp Ala Asp Leu Ala Glu Ala Pro Phe Gln Ile
 1 5 10 15
 Ser Leu Leu Lys
 20

<210> 77
 <211> 213
 <212> PRT
 <213> Dermatophagoides farinae (House-dust mite)

<400> 77
 Met Met Lys Phe Leu Leu Ile Ala Ala Val Ala Phe Val Ala Val Ser
 1 5 10 15
 Ala Asp Pro Ile His Tyr Asp Lys Ile Thr Glu Glu Ile Asn Lys Ala
 20 25 30
 Ile Asp Asp Ala Ile Ala Ala Ile Glu Gln Ser Glu Thr Ile Asp Pro
 35 40 45
 Met Lys Val Pro Asp His Ala Asp Lys Phe Glu Arg His Val Gly Ile
 50 55 60
 Val Asp Phe Lys Gly Glu Leu Ala Met Arg Asn Ile Glu Ala Arg Gly

65					70					75					80
Leu	Lys	Gln	Met	Lys	Arg	Gln	Gly	Asp	Ala	Asn	Val	Lys	Gly	Glu	Glu
				85					90					95	
Gly	Ile	Val	Lys	Ala	His	Leu	Leu	Ile	Gly	Val	His	Asp	Asp	Ile	Val
			100					105					110		
Ser	Met	Glu	Tyr	Asp	Leu	Ala	Tyr	Lys	Leu	Gly	Asp	Leu	His	Pro	Thr
		115					120					125			
Thr	His	Val	Ile	Ser	Asp	Ile	Gln	Asp	Phe	Val	Val	Ala	Leu	Ser	Leu
	130					135					140				
Glu	Ile	Ser	Asp	Glu	Gly	Asn	Ile	Thr	Met	Thr	Ser	Phe	Glu	Val	Arg
145					150					155					160
Gln	Phe	Ala	Asn	Val	Val	Asn	His	Ile	Gly	Gly	Leu	Ser	Ile	Leu	Asp
			165						170					175	
Pro	Ile	Phe	Gly	Val	Leu	Ser	Asp	Val	Leu	Thr	Ala	Ile	Phe	Gln	Asp
			180					185					190		
Thr	Val	Arg	Lys	Glu	Met	Thr	Lys	Val	Leu	Ala	Pro	Ala	Phe	Lys	Arg
		195					200					205			
Glu	Leu	Glu	Lys	Asn											
	210														

<210> 78
 <211> 30
 <212> PRT
 <213> Dermatophagoides microceras (House-dust mite)

<400> 78															
Thr	Gln	Ala	Cys	Arg	Ile	Asn	Ser	Gly	Asn	Val	Pro	Ser	Glu	Leu	Asp
1				5				10						15	
Leu	Arg	Ser	Leu	Arg	Thr	Val	Thr	Pro	Ile	Arg	Met	Gln	Gly		
			20					25					30		

<210> 79
 <211> 320
 <212> PRT
 <213> Dermatophagoides pteronyssinus (House-dust mite)

<400> 79															
Met	Lys	Ile	Val	Leu	Ala	Ile	Ala	Ser	Leu	Leu	Ala	Leu	Ser	Ala	Val
1				5					10					15	
Tyr	Ala	Arg	Pro	Ser	Ser	Ile	Lys	Thr	Phe	Glu	Glu	Tyr	Lys	Lys	Ala
			20					25					30		
Phe	Asn	Lys	Ser	Tyr	Ala	Thr	Phe	Glu	Asp	Glu	Glu	Ala	Ala	Arg	Lys
		35					40					45			
Asn	Phe	Leu	Glu	Ser	Val	Lys	Tyr	Val	Gln	Ser	Asn	Gly	Gly	Ala	Ile
	50					55					60				
Asn	His	Leu	Ser	Asp	Leu	Ser	Leu	Asp	Glu	Phe	Lys	Asn	Arg	Phe	Leu
65					70					75					80
Met	Ser	Ala	Glu	Ala	Phe	Glu	His	Leu	Lys	Thr	Gln	Phe	Asp	Leu	Asn
				85					90					95	
Ala	Glu	Thr	Asn	Ala	Cys	Ser	Ile	Asn	Gly	Asn	Ala	Pro	Ala	Glu	Ile
			100					105					110		
Asp	Leu	Arg	Gln	Met	Arg	Thr	Val	Thr	Pro	Ile	Arg	Met	Gln	Gly	Gly
		115					120					125			
Cys	Gly	Ser	Cys	Trp	Ala	Phe	Ser	Gly	Val	Ala	Ala	Thr	Glu	Ser	Ala
	130					135					140				
Tyr	Leu	Ala	Tyr	Arg	Asn	Gln	Ser	Leu	Asp	Leu	Ala	Glu	Gln	Glu	Leu
145					150					155					160
Val	Asp	Cys	Ala	Ser	Gln	His	Gly	Cys	His	Gly	Asp	Thr	Ile	Pro	Arg
				165					170					175	

Gly	Ile	Glu	Tyr	Ile	Gln	His	Asn	Gly	Val	Val	Gln	Glu	Ser	Tyr	Tyr		
			180					185					190				
Arg	Tyr	Val	Ala	Arg	Glu	Gln	Ser	Cys	Arg	Arg	Pro	Asn	Ala	Gln	Arg		
		195					200					205					
Phe	Gly	Ile	Ser	Asn	Tyr	Cys	Gln	Ile	Tyr	Pro	Pro	Asn	Val	Asn	Lys		
	210					215					220						
Ile	Arg	Glu	Ala	Leu	Ala	Gln	Thr	His	Ser	Ala	Ile	Ala	Val	Ile	Ile		
	225				230					235					240		
Gly	Ile	Lys	Asp	Leu	Asp	Ala	Phe	Arg	His	Tyr	Asp	Gly	Arg	Thr	Ile		
			245					250					255				
Ile	Gln	Arg	Asp	Asn	Gly	Tyr	Gln	Pro	Asn	Tyr	His	Ala	Val	Asn	Ile		
			260					265					270				
Val	Gly	Tyr	Ser	Asn	Ala	Gln	Gly	Val	Asp	Tyr	Trp	Ile	Val	Arg	Asn		
	275						280					285					
Ser	Trp	Asp	Thr	Asn	Trp	Gly	Asp	Asn	Gly	Tyr	Gly	Tyr	Phe	Ala	Ala		
	290					295					300						
Asn	Ile	Asp	Leu	Met	Met	Ile	Glu	Glu	Tyr	Pro	Tyr	Val	Val	Ile	Leu		
	305				310					315					320		

<210> 80

<211> 146

<212> PRT

<213> Dermatophagoides pteronyssinus (House-dust mite)

<400> 80

Met	Met	Tyr	Lys	Ile	Leu	Cys	Leu	Ser	Leu	Leu	Val	Ala	Ala	Val	Ala		
	1			5				10						15			
Arg	Asp	Gln	Val	Asp	Val	Lys	Asp	Cys	Ala	Asn	His	Glu	Ile	Lys	Lys		
		20						25					30				
Val	Leu	Val	Pro	Gly	Cys	His	Gly	Ser	Glu	Pro	Cys	Ile	Ile	His	Arg		
	35						40					45					
Gly	Lys	Pro	Phe	Gln	Leu	Glu	Ala	Val	Phe	Glu	Ala	Asn	Gln	Asn	Thr		
	50					55					60						
Lys	Thr	Ala	Lys	Ile	Glu	Ile	Lys	Ala	Ser	Ile	Asp	Gly	Leu	Glu	Val		
	65				70					75				80			
Asp	Val	Pro	Gly	Ile	Asp	Pro	Asn	Ala	Cys	His	Tyr	Met	Lys	Cys	Pro		
				85				90					95				
Leu	Val	Lys	Gly	Gln	Gln	Tyr	Asp	Ile	Lys	Tyr	Thr	Trp	Asn	Val	Pro		
		100						105					110				
Lys	Ile	Ala	Pro	Lys	Ser	Glu	Asn	Val	Val	Val	Thr	Val	Lys	Val	Met		
		115					120					125					
Gly	Asp	Asp	Gly	Val	Leu	Ala	Cys	Ala	Ile	Ala	Thr	His	Ala	Lys	Ile		
	130					135					140						
Arg	Asp																
	145																

<210> 81

<211> 261

<212> PRT

<213> Dermatophagoides pteronyssinus (House-dust mite)

<400> 81

Met	Ile	Ile	Tyr	Asn	Ile	Leu	Ile	Val	Leu	Leu	Leu	Ala	Ile	Asn	Thr		
	1			5				10						15			
Leu	Ala	Asn	Pro	Ile	Leu	Pro	Ala	Ser	Pro	Asn	Ala	Thr	Ile	Val	Gly		
		20						25					30				
Gly	Glu	Lys	Ala	Leu	Ala	Gly	Glu	Cys	Pro	Tyr	Gln	Ile	Ser	Leu	Gln		
		35					40					45					
Ser	Ser	Ser	His	Phe	Cys	Gly	Gly	Thr	Ile	Leu	Asp	Glu	Tyr	Trp	Ile		

50						55					60					
Leu	Thr	Ala	Ala	His	Cys	Val	Ala	Gly	Gln	Thr	Ala	Ser	Lys	Leu	Ser	
65					70					75					80	
Ile	Arg	Tyr	Asn	Ser	Leu	Lys	His	Ser	Leu	Gly	Gly	Glu	Lys	Ile	Ser	
				85					90					95		
Val	Ala	Lys	Ile	Phe	Ala	His	Glu	Lys	Tyr	Asp	Ser	Tyr	Gln	Ile	Asp	
			100					105					110			
Asn	Asp	Ile	Ala	Leu	Ile	Lys	Leu	Lys	Ser	Pro	Met	Lys	Leu	Asn	Gln	
		115					120					125				
Lys	Asn	Ala	Lys	Ala	Val	Gly	Leu	Pro	Ala	Lys	Gly	Ser	Asp	Val	Lys	
	130					135					140					
Val	Gly	Asp	Gln	Val	Arg	Val	Ser	Gly	Trp	Gly	Tyr	Leu	Glu	Glu	Gly	
145					150					155					160	
Ser	Tyr	Ser	Leu	Pro	Ser	Glu	Leu	Arg	Arg	Val	Asp	Ile	Ala	Val	Val	
				165					170					175		
Ser	Arg	Lys	Glu	Cys	Asn	Glu	Leu	Tyr	Ser	Lys	Ala	Asn	Ala	Glu	Val	
		180						185				190				
Thr	Asp	Asn	Met	Ile	Cys	Gly	Gly	Asp	Val	Ala	Asn	Gly	Gly	Lys	Asp	
	195					200						205				
Ser	Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Asp	Val	Lys	Asn	Asn	
	210					215					220					
Gln	Val	Val	Gly	Ile	Val	Ser	Trp	Gly	Tyr	Gly	Cys	Ala	Arg	Lys	Gly	
225					230					235					240	
Tyr	Pro	Gly	Val	Tyr	Thr	Arg	Val	Gly	Asn	Phe	Ile	Asp	Trp	Ile	Glu	
			245					250						255		
Ser	Lys	Arg	Ser	Gln												
			260													

<210> 82
 <211> 19
 <212> PRT
 <213> Dermatophagoides pteronyssinus (House-dust mite)

<220>
 <221> UNSURE
 <222> 3, 16
 <223> Xaa = any amino acid

<400> 82																
Lys	Tyr	Xaa	Asn	Pro	His	Phe	Ile	Gly	Xaa	Arg	Ser	Val	Ile	Thr	Xaa	
1			5					10					15			
Leu	Met	Glu														

<210> 83
 <211> 132
 <212> PRT
 <213> Dermatophagoides pteronyssinus (House-dust mite)

<400> 83																
Met	Lys	Phe	Ile	Ile	Ala	Phe	Phe	Val	Ala	Thr	Leu	Ala	Val	Met	Thr	
1			5					10					15			
Val	Ser	Gly	Glu	Asp	Lys	Lys	His	Asp	Tyr	Gln	Asn	Glu	Phe	Asp	Phe	
		20					25					30				
Leu	Leu	Met	Glu	Arg	Ile	His	Glu	Gln	Ile	Lys	Lys	Gly	Glu	Leu	Ala	
		35				40					45					
Leu	Phe	Tyr	Leu	Gln	Glu	Gln	Ile	Asn	His	Phe	Glu	Glu	Lys	Pro	Thr	
	50				55				60							
Lys	Glu	Met	Lys	Asp	Lys	Ile	Val	Ala	Glu	Met	Asp	Thr	Ile	Ile	Ala	

65					70					75				80
Met	Ile	Asp	Gly	Val	Arg	Gly	Val	Leu	Asp	Arg	Leu	Met	Gln	Arg
				85					90				95	
Asp	Leu	Asp	Ile	Phe	Glu	Gln	Tyr	Asn	Leu	Glu	Met	Ala	Lys	Lys
			100					105					110	Ser
Gly	Asp	Ile	Leu	Glu	Arg	Asp	Leu	Lys	Lys	Glu	Glu	Ala	Arg	Val
		115					120					125		Lys
Lys	Ile	Glu	Val											
	130													

<210> 84
 <211> 20
 <212> PRT
 <213> Dermatophagoides pteronyssinus (House-dust mite)

<220>
 <221> UNSURE
 <222> 4
 <223> Xaa = any amino acid

<400> 84														
Ala	Ile	Gly	Xaa	Gln	Pro	Ala	Ala	Glu	Ala	Glu	Ala	Pro	Phe	Gln
1				5				10					15	Ile
Ser	Leu	Met	Lys											
			20											

<210> 85
 <211> 215
 <212> PRT
 <213> Dermatophagoides pteronyssinus (House-dust mite)

<400> 85														
Met	Met	Lys	Leu	Leu	Leu	Ile	Ala	Ala	Ala	Ala	Phe	Val	Ala	Val
1				5				10					15	Ser
Ala	Asp	Pro	Ile	His	Tyr	Asp	Lys	Ile	Thr	Glu	Glu	Ile	Asn	Lys
			20					25					30	Ala
Val	Asp	Glu	Ala	Val	Ala	Ala	Ile	Glu	Lys	Ser	Glu	Thr	Phe	Asp
		35					40				45			Pro
Met	Lys	Val	Pro	Asp	His	Ser	Asp	Lys	Phe	Glu	Arg	His	Ile	Gly
	50					55					60			Ile
Ile	Asp	Leu	Lys	Gly	Glu	Leu	Asp	Met	Arg	Asn	Ile	Gln	Val	Arg
65					70				75					80
Leu	Lys	Gln	Met	Lys	Arg	Val	Gly	Asp	Ala	Asn	Val	Lys	Ser	Glu
				85					90					95
Gly	Val	Val	Lys	Ala	His	Leu	Leu	Val	Gly	Val	His	Asp	Asp	Val
			100					105					110	Val
Ser	Met	Glu	Tyr	Asp	Leu	Ala	Tyr	Lys	Leu	Gly	Asp	Leu	His	Pro
		115					120				125			Asn
Thr	His	Val	Ile	Ser	Asp	Ile	Gln	Asp	Phe	Val	Val	Glu	Leu	Ser
	130					135				140				Leu
Glu	Val	Ser	Glu	Glu	Gly	Asn	Met	Thr	Leu	Thr	Ser	Phe	Glu	Val
145					150				155					160
Gln	Phe	Ala	Asn	Val	Val	Asn	His	Ile	Gly	Gly	Leu	Ser	Ile	Leu
			165					170					175	Asp
Pro	Ile	Phe	Ala	Val	Leu	Ser	Asp	Val	Leu	Thr	Ala	Ile	Phe	Gln
		180					185					190		Asp
Thr	Val	Arg	Ala	Glu	Met	Thr	Lys	Val	Leu	Ala	Pro	Ala	Phe	Lys
		195					200					205		Lys
Glu	Leu	Glu	Arg	Asn	Asn	Gln								

210

215

<210> 86

<211> 203

<212> PRT

<213> Dolichovespula arenaria (Yellow hornet)

<400> 86

Asn	Asn	Tyr	Cys	Lys	Ile	Cys	Pro	Lys	Gly	Thr	His	Thr	Leu	Cys	Lys
1				5					10					15	
Tyr	Gly	Thr	Ser	Met	Lys	Pro	Asn	Cys	Gly	Gly	Lys	Ile	Val	Lys	Ser
			20					25					30		
Tyr	Gly	Val	Thr	Asn	Asp	Glu	Lys	Asn	Glu	Ile	Val	Lys	Arg	His	Asn
		35					40					45			
Glu	Phe	Arg	Gln	Lys	Val	Ala	Gln	Gly	Leu	Glu	Thr	Arg	Gly	Asn	Pro
	50					55					60				
Gly	Pro	Gln	Pro	Pro	Ala	Lys	Asn	Met	Asn	Leu	Leu	Val	Trp	Asn	Asp
65					70					75					80
Glu	Leu	Ala	Lys	Ile	Ala	Gln	Thr	Trp	Ala	Asn	Gln	Cys	Asn	Phe	Gly
				85					90					95	
His	Asp	Gln	Cys	Arg	Asn	Thr	Ala	Lys	Tyr	Pro	Val	Gly	Gln	Asn	Val
			100					105					110		
Ala	Ile	Ala	Ser	Thr	Thr	Gly	Asn	Ser	Tyr	Gln	Thr	Met	Ser	Tyr	Leu
		115					120					125			
Ile	Lys	Met	Trp	Glu	Asp	Glu	Val	Lys	Asp	Tyr	Asn	Pro	His	Lys	Asp
	130					135					140				
Leu	Met	His	Asn	Asn	Phe	Ser	Lys	Val	Gly	His	Tyr	Thr	Gln	Met	Val
145					150					155					160
Trp	Gly	Lys	Thr	Lys	Glu	Ile	Gly	Cys	Gly	Ser	Val	Lys	Tyr	Ile	Glu
				165					170					175	
Asn	Lys	Trp	His	Thr	His	Tyr	Leu	Val	Cys	Asn	Tyr	Gly	Pro	Ala	Gly
			180					185					190		
Asn	Tyr	Met	Asn	Gln	Pro	Val	Tyr	Glu	Arg	Lys					
		195						200							

<210> 87

<211> 317

<212> PRT

<213> Dolichovespula maculata (White-face hornet)

<400> 87

Arg	Leu	Ile	Met	Phe	Val	Gly	Asp	Pro	Ser	Ser	Ser	Asn	Glu	Leu	Asp
1				5					10					15	
Arg	Phe	Ser	Val	Cys	Pro	Phe	Ser	Asn	Asp	Thr	Val	Lys	Met	Ile	Phe
			20					25					30		
Leu	Thr	Arg	Glu	Asn	Arg	Lys	His	Asp	Phe	Tyr	Thr	Leu	Asp	Thr	Met
		35					40					45			
Asn	Arg	His	Asn	Glu	Phe	Lys	Lys	Ser	Ile	Ile	Lys	Arg	Pro	Val	Val
	50					55					60				
Phe	Ile	Thr	His	Gly	Phe	Thr	Ser	Ser	Ala	Thr	Glu	Lys	Asn	Phe	Val
65					70					75					80
Ala	Met	Ser	Glu	Ala	Leu	Met	His	Thr	Gly	Asp	Phe	Leu	Ile	Ile	Met
				85					90					95	
Val	Asp	Trp	Arg	Met	Ala	Ala	Cys	Thr	Asp	Glu	Tyr	Pro	Gly	Leu	Lys
			100					105					110		
Tyr	Met	Phe	Tyr	Lys	Ala	Ala	Val	Gly	Asn	Thr	Arg	Leu	Val	Gly	Asn
		115					120					125			
Phe	Ile	Ala	Met	Ile	Ala	Lys	Lys	Leu	Val	Glu	Gln	Tyr	Lys	Val	Pro
	130						135				140				

Met	Thr	Asn	Ile	Arg	Leu	Val	Gly	His	Ser	Leu	Gly	Ala	His	Ile	Ser
145					150					155					160
Gly	Phe	Ala	Gly	Lys	Arg	Val	Gln	Glu	Leu	Lys	Leu	Gly	Lys	Phe	Ser
			165						170						175
Glu	Ile	Ile	Gly	Leu	Asp	Pro	Ala	Gly	Pro	Ser	Phe	Lys	Lys	Asn	Asp
			180					185					190		
Cys	Ser	Glu	Arg	Ile	Cys	Glu	Thr	Asp	Ala	His	Tyr	Val	Gln	Ile	Leu
		195					200					205			
His	Thr	Ser	Ser	Asn	Leu	Gly	Thr	Glu	Arg	Thr	Leu	Gly	Thr	Val	Asp
	210					215					220				
Phe	Tyr	Ile	Asn	Asn	Gly	Ser	Asn	Gln	Pro	Gly	Cys	Arg	Tyr	Ile	Ile
225					230					235					240
Gly	Glu	Thr	Cys	Ser	His	Thr	Arg	Ala	Val	Lys	Tyr	Phe	Thr	Glu	Cys
			245					250						255	
Ile	Arg	Arg	Glu	Cys	Cys	Leu	Ile	Gly	Val	Pro	Gln	Ser	Lys	Asn	Pro
			260					265					270		
Gln	Pro	Val	Ser	Lys	Cys	Thr	Arg	Asn	Glu	Cys	Val	Cys	Val	Gly	Leu
		275					280					285			
Asn	Ala	Lys	Lys	Tyr	Pro	Lys	Arg	Gly	Ser	Phe	Tyr	Val	Pro	Val	Glu
	290					295					300				
Ala	Glu	Ala	Pro	Tyr	Cys	Asn	Asn	Asn	Gly	Lys	Ile	Ile			
305					310					315					

<210> 88

<211> 303

<212> PRT

<213> Dolichovespula maculata (White-face hornet)

<400> 88

Gly	Ile	Leu	Pro	Glu	Cys	Lys	Leu	Val	Pro	Glu	Glu	Ile	Ser	Phe	Val
1				5					10					15	
Leu	Ser	Thr	Arg	Glu	Asn	Arg	Asp	Gly	Val	Tyr	Leu	Thr	Leu	Gln	Lys
			20					25					30		
Leu	Lys	Asn	Gly	Lys	Met	Phe	Lys	Asn	Ser	Asp	Leu	Ser	Ser	Lys	Lys
		35					40					45			
Val	Pro	Phe	Leu	Ile	His	Gly	Phe	Ile	Ser	Ser	Ala	Thr	Asn	Lys	Asn
	50					55					60				
Tyr	Ala	Asp	Met	Thr	Arg	Ala	Leu	Leu	Asp	Lys	Asp	Asp	Ile	Met	Val
65					70					75				80	
Ile	Ser	Ile	Asp	Trp	Arg	Asp	Gly	Ala	Cys	Ser	Asn	Glu	Phe	Ala	Leu
			85						90					95	
Leu	Lys	Phe	Ile	Gly	Tyr	Pro	Lys	Ala	Val	Glu	Asn	Thr	Arg	Ala	Val
			100					105					110		
Gly	Lys	Tyr	Ile	Ala	Asp	Phe	Ser	Lys	Ile	Leu	Ile	Gln	Lys	Tyr	Lys
		115					120					125			
Val	Leu	Leu	Glu	Asn	Ile	Arg	Leu	Ile	Gly	His	Ser	Leu	Gly	Ala	Gln
	130					135					140				
Ile	Ala	Gly	Phe	Ala	Gly	Lys	Glu	Phe	Gln	Arg	Phe	Lys	Leu	Gly	Lys
145					150					155					160
Tyr	Pro	Glu	Ile	Ile	Gly	Leu	Asp	Pro	Ala	Gly	Pro	Ser	Phe	Lys	Lys
			165					170						175	
Lys	Asp	Cys	Pro	Glu	Arg	Ile	Cys	Glu	Thr	Asp	Ala	His	Tyr	Val	Gln
			180					185					190		
Ile	Leu	His	Thr	Ser	Ser	Asn	Leu	Gly	Thr	Glu	Arg	Thr	Leu	Gly	Thr
	195					200						205			
Val	Asp	Phe	Tyr	Ile	Asn	Asp	Gly	Ser	Asn	Gln	Pro	Gly	Cys	Thr	Tyr
	210					215					220				
Ile	Ile	Gly	Glu	Thr	Cys	Ser	His	Thr	Arg	Ala	Val	Lys	Tyr	Leu	Thr
225					230					235					240
Glu	Cys	Ile	Arg	Arg	Glu	Cys	Cys	Leu	Ile	Gly	Val	Pro	Gln	Ser	Lys

				245					250				255			
Asn	Pro	Gln	Pro	Val	Ser	Lys	Cys	Thr	Arg	Asn	Glu	Cys	Val	Cys	Val	
			260					265					270			
Gly	Leu	Asn	Ala	Lys	Glu	Tyr	Pro	Lys	Lys	Gly	Ser	Phe	Tyr	Val	Pro	
		275					280					285				
Val	Glu	Ala	Lys	Ala	Pro	Phe	Cys	Asn	Asn	Asn	Gly	Lys	Ile	Ile		
	290					295					300					

<210> 89

<211> 331

<212> PRT

<213> Dolichovespula maculata (White-face hornet)

<400> 89

Ser	Glu	Arg	Pro	Lys	Arg	Val	Phe	Asn	Ile	Tyr	Trp	Asn	Val	Pro	Thr	
1				5					10					15		
Phe	Met	Cys	His	Gln	Tyr	Gly	Leu	Tyr	Phe	Asp	Glu	Val	Thr	Asn	Phe	
			20					25					30			
Asn	Ile	Lys	His	Asn	Ser	Lys	Asp	Asp	Phe	Gln	Gly	Asp	Lys	Ile	Ser	
		35					40					45				
Ile	Phe	Tyr	Asp	Pro	Gly	Glu	Phe	Pro	Ala	Leu	Leu	Pro	Leu	Lys	Glu	
	50					55					60					
Gly	Asn	Tyr	Lys	Ile	Arg	Asn	Gly	Gly	Val	Pro	Gln	Glu	Gly	Asn	Ile	
65				70					75						80	
Thr	Ile	His	Leu	Gln	Arg	Phe	Ile	Glu	Asn	Leu	Asp	Lys	Thr	Tyr	Pro	
			85					90						95		
Asn	Arg	Asn	Phe	Asn	Gly	Ile	Gly	Val	Ile	Asp	Phe	Glu	Arg	Trp	Arg	
			100					105					110			
Pro	Ile	Phe	Arg	Gln	Asn	Trp	Gly	Asn	Met	Met	Ile	His	Lys	Lys	Phe	
	115						120					125				
Ser	Ile	Asp	Leu	Val	Arg	Asn	Glu	His	Pro	Phe	Trp	Asp	Lys	Lys	Met	
	130					135					140					
Ile	Glu	Leu	Glu	Ala	Ser	Lys	Arg	Phe	Glu	Lys	Tyr	Ala	Arg	Leu	Phe	
145				150					155						160	
Met	Glu	Glu	Thr	Leu	Lys	Leu	Ala	Lys	Lys	Thr	Arg	Lys	Gln	Ala	Asp	
			165						170					175		
Trp	Gly	Tyr	Tyr	Gly	Tyr	Pro	Tyr	Cys	Phe	Asn	Met	Ser	Pro	Asn	Asn	
		180						185					190			
Leu	Val	Pro	Asp	Cys	Asp	Ala	Thr	Ala	Met	Leu	Glu	Asn	Asp	Lys	Met	
		195					200					205				
Ser	Trp	Leu	Phe	Asn	Asn	Gln	Asn	Val	Leu	Leu	Pro	Ser	Val	Tyr	Ile	
	210					215					220					
Arg	His	Glu	Leu	Thr	Pro	Asp	Gln	Arg	Val	Gly	Leu	Val	Gln	Gly	Arg	
225					230					235					240	
Val	Lys	Glu	Ala	Val	Arg	Ile	Ser	Asn	Asn	Leu	Lys	His	Ser	Pro	Lys	
			245						250					255		
Val	Leu	Ser	Tyr	Trp	Trp	Tyr	Val	Tyr	Gln	Asp	Asp	Thr	Asn	Thr	Phe	
		260						265					270			
Leu	Thr	Glu	Thr	Asp	Val	Lys	Lys	Thr	Phe	Gln	Glu	Ile	Ala	Ile	Asn	
		275					280					285				
Gly	Gly	Asp	Gly	Ile	Ile	Ile	Trp	Gly	Ser	Ser	Ser	Asp	Val	Asn	Ser	
	290					295					300					
Leu	Ser	Lys	Cys	Lys	Arg	Leu	Arg	Glu	Tyr	Leu	Leu	Thr	Val	Leu	Gly	
305					310					315					320	
Pro	Ile	Thr	Val	Asn	Val	Thr	Glu	Thr	Val	Asn						
				325					330							

<210> 90

<211> 227

<212> PRT

<213> Dolichovespula maculata (White-face hornet)

<400> 90

```
Met Glu Ile Gly Gly Leu Val Tyr Leu Ile Leu Ile Ile Thr Ile Ile
 1          5          10          15
Asn Leu Ser Phe Gly Glu Thr Asn Asn Tyr Cys Lys Ile Lys Cys Arg
 20          25          30
Lys Gly Ile His Thr Leu Cys Lys Phe Gly Thr Ser Met Lys Pro Asn
 35          40          45
Cys Gly Arg Asn Val Val Lys Ala Tyr Gly Leu Thr Asn Asp Glu Lys
 50          55          60
Asn Glu Ile Leu Lys Arg His Asn Asp Phe Arg Gln Asn Val Ala Lys
 65          70          75          80
Gly Leu Glu Thr Arg Gly Lys Pro Gly Pro Gln Pro Pro Ala Lys Asn
 85          90          95
Met Asn Val Leu Val Trp Asn Asp Glu Leu Ala Lys Ile Ala Gln Thr
 100          105          110
Trp Ala Asn Gln Cys Asp Phe Asn His Asp Asp Cys Arg Asn Thr Ala
 115          120          125
Lys Tyr Gln Val Gly Gln Asn Ile Ala Ile Ser Ser Thr Thr Ala Thr
 130          135          140
Gln Phe Asp Arg Pro Ser Lys Leu Ile Lys Gln Trp Glu Asp Glu Val
 145          150          155          160
Thr Glu Phe Asn Tyr Lys Val Gly Leu Gln Asn Ser Asn Phe Arg Lys
 165          170          175
Val Gly His Tyr Thr Gln Met Val Trp Gly Lys Thr Lys Glu Ile Gly
 180          185          190
Cys Gly Ser Ile Lys Tyr Ile Glu Asp Asn Trp Tyr Thr His Tyr Leu
 195          200          205
Val Cys Asn Tyr Gly Pro Gly Gly Asn Asp Phe Asn Gln Pro Ile Tyr
 210          215          220
Glu Arg Lys
225
```

<210> 91

<211> 215

<212> PRT

<213> Dolichovespula maculata (White-face hornet)

<400> 91

```
Pro Ile Ile Asn Leu Ser Phe Gly Glu Ala Asn Asn Tyr Cys Lys Ile
 1          5          10          15
Lys Cys Ser Arg Gly Ile His Thr Leu Cys Lys Phe Gly Thr Ser Met
 20          25          30
Lys Pro Asn Cys Gly Ser Lys Leu Val Lys Val His Gly Val Ser Asn
 35          40          45
Asp Glu Lys Asn Glu Ile Val Asn Arg His Asn Gln Phe Arg Gln Lys
 50          55          60
Val Ala Lys Gly Leu Glu Thr Arg Gly Asn Pro Gly Pro Gln Pro Pro
 65          70          75          80
Ala Lys Asn Met Asn Val Leu Val Trp Asn Asp Glu Leu Ala Lys Ile
 85          90          95
Ala Gln Thr Trp Ala Asn Gln Cys Ser Phe Gly His Asp Gln Cys Arg
 100          105          110
Asn Thr Glu Lys Tyr Gln Val Gly Gln Asn Val Ala Ile Ala Ser Thr
 115          120          125
Thr Gly Asn Ser Tyr Ala Thr Met Ser Lys Leu Ile Glu Met Trp Glu
 130          135          140
Asn Glu Val Lys Asp Phe Asn Pro Lys Lys Gly Thr Met Gly Asp Asn
```


145					150					155				160	
Asn	Phe	Ser	Lys	Val	Gly	His	Tyr	Thr	Gln	Met	Val	Trp	Gly	Lys	Thr
				165					170					175	
Lys	Glu	Ile	Gly	Cys	Gly	Ser	Val	Lys	Tyr	Ile	Glu	Asn	Asn	Trp	His
			180					185					190		
Thr	His	Tyr	Leu	Val	Cys	Asn	Tyr	Gly	Pro	Ala	Gly	Asn	Tyr	Met	Asp
		195					200					205			
Gln	Pro	Ile	Tyr	Glu	Arg	Lys									
	210					215									

<210> 92
 <211> 187
 <212> PRT
 <213> Equus caballus (Horse)

<400> 92															
Met	Lys	Leu	Leu	Leu	Leu	Cys	Leu	Gly	Leu	Ile	Leu	Val	Cys	Ala	Gln
1				5				10					15		
Gln	Glu	Glu	Asn	Ser	Asp	Val	Ala	Ile	Arg	Asn	Phe	Asp	Ile	Ser	Lys
			20					25					30		
Ile	Ser	Gly	Glu	Trp	Tyr	Ser	Ile	Phe	Leu	Ala	Ser	Asp	Val	Lys	Glu
		35				40						45			
Lys	Ile	Glu	Glu	Asn	Gly	Ser	Met	Arg	Val	Phe	Val	Asp	Val	Ile	Arg
	50					55					60				
Ala	Leu	Asp	Asn	Ser	Ser	Leu	Tyr	Ala	Glu	Tyr	Gln	Thr	Lys	Val	Asn
65				70				75						80	
Gly	Glu	Cys	Thr	Glu	Phe	Pro	Met	Val	Phe	Asp	Lys	Thr	Glu	Glu	Asp
			85					90					95		
Gly	Val	Tyr	Ser	Leu	Asn	Tyr	Asp	Gly	Tyr	Asn	Val	Phe	Arg	Ile	Ser
			100					105					110		
Glu	Phe	Glu	Asn	Asp	Glu	His	Ile	Ile	Leu	Tyr	Leu	Val	Asn	Phe	Asp
		115				120						125			
Lys	Asp	Arg	Pro	Phe	Gln	Leu	Phe	Glu	Phe	Tyr	Ala	Arg	Glu	Pro	Asp
	130					135					140				
Val	Ser	Pro	Glu	Ile	Lys	Glu	Glu	Phe	Val	Lys	Ile	Val	Gln	Lys	Arg
145					150					155					160
Gly	Ile	Val	Lys	Glu	Asn	Ile	Ile	Asp	Leu	Thr	Lys	Ile	Asp	Arg	Cys
			165					170					175		
Phe	Gln	Leu	Arg	Gly	Asn	Gly	Val	Ala	Gln	Ala					
			180					185							

<210> 93
 <211> 29
 <212> PRT
 <213> Equus caballus (Horse)

<220>
 <221> UNSURE
 <222> 3, 28
 <223> Xaa = any amino acid

<400> 93															
Ser	Gln	Xaa	Pro	Gln	Ser	Glu	Thr	Asp	Tyr	Ser	Gln	Leu	Ser	Gly	Glu
1				5				10						15	
Trp	Asn	Thr	Ile	Tyr	Gly	Ala	Ala	Ser	Asn	Ile	Xaa	Lys			
			20					25							

<210> 94

<211> 19
<212> PRT
<213> Equus caballus (Horse)

<220>
<221> UNSURE
<222> 1
<223> Xaa = any amino acid

<400> 94
Xaa Gln Asp Pro Gln Ser Glu Thr Asp Tyr Ser Gln Leu Ser Gly Glu
1 5 10 15
Trp Asn Thr

<210> 95
<211> 211
<212> PRT
<213> Euroglyphus maynei (House-dust mite)

<400> 95
Thr Tyr Ala Cys Ser Ile Asn Ser Val Ser Leu Pro Ser Glu Leu Asp
1 5 10 15
Leu Arg Ser Leu Arg Thr Val Thr Pro Ile Arg Met Gln Gly Gly Cys
20 25 30
Gly Ser Cys Trp Ala Phe Ser Gly Val Ala Ser Thr Glu Ser Ala Tyr
35 40 45
Leu Ala Tyr Arg Asn Met Ser Leu Asp Leu Ala Glu Gln Glu Leu Val
50 55 60
Asp Cys Ala Ser Gln Asn Gly Cys His Gly Asp Thr Ile Pro Arg Gly
65 70 75 80
Ile Glu Tyr Ile Gln Gln Asn Gly Val Val Gln Glu His Tyr Tyr Pro
85 90 95
Tyr Val Ala Arg Glu Gln Ser Cys His Arg Pro Asn Ala Gln Arg Tyr
100 105 110
Gly Leu Lys Asn Tyr Cys Gln Ile Ser Pro Pro Asp Ser Asn Lys Ile
115 120 125
Arg Gln Ala Leu Thr Gln Thr His Thr Ala Val Ala Val Ile Ile Gly
130 135 140
Ile Lys Asp Leu Asn Ala Phe Arg His Tyr Asp Gly Arg Thr Ile Met
145 150 155 160
Gln His Asp Asn Gly Tyr Gln Pro Asn Tyr His Ala Val Asn Ile Val
165 170 175
Gly Tyr Gly Asn Thr Gln Gly Val Asp Tyr Trp Ile Val Arg Asn Ser
180 185 190
Trp Asp Thr Thr Trp Gly Asp Asn Gly Tyr Gly Tyr Phe Ala Ala Asn
195 200 205
Ile Asn Leu
210

<210> 96
<211> 92
<212> PRT
<213> Felis silvestris catus (Cat)

<400> 96
Met Lys Gly Ala Cys Val Leu Val Leu Leu Trp Ala Ala Leu Leu Leu
1 5 10 15
Ile Ser Gly Gly Asn Cys Glu Ile Cys Pro Ala Val Lys Arg Asp Val

20 25 30
 Asp Leu Phe Leu Thr Gly Thr Pro Asp Glu Tyr Val Glu Gln Val Ala
 35 40 45
 Gln Tyr Lys Ala Leu Pro Val Val Leu Glu Asn Ala Arg Ile Leu Lys
 50 55 60
 Asn Cys Val Asp Ala Lys Met Thr Glu Glu Asp Lys Glu Asn Ala Leu
 65 70 75 80
 Ser Val Leu Asp Lys Ile Tyr Thr Ser Pro Leu Cys
 85 90

<210> 97
 <211> 88
 <212> PRT
 <213> Felis silvestris catus (Cat)

<400> 97
 Met Leu Asp Ala Ala Leu Pro Pro Cys Pro Thr Val Ala Ala Thr Ala
 1 5 10 15
 Asp Cys Glu Ile Cys Pro Ala Val Lys Arg Asp Val Asp Leu Phe Leu
 20 25 30
 Thr Gly Thr Pro Asp Glu Tyr Val Glu Gln Val Ala Gln Tyr Lys Ala
 35 40 45
 Leu Pro Val Val Leu Glu Asn Ala Arg Ile Leu Lys Asn Cys Val Asp
 50 55 60
 Ala Lys Met Thr Glu Glu Asp Lys Glu Asn Ala Leu Ser Val Leu Asp
 65 70 75 80
 Lys Ile Tyr Thr Ser Pro Leu Cys
 85

<210> 98
 <211> 109
 <212> PRT
 <213> Felis silvestris catus (Cat)

<400> 98
 Met Arg Gly Ala Leu Leu Val Leu Ala Leu Leu Val Thr Gln Ala Leu
 1 5 10 15
 Gly Val Lys Met Ala Glu Thr Cys Pro Ile Phe Tyr Asp Val Phe Phe
 20 25 30
 Ala Val Ala Asn Gly Asn Glu Leu Leu Leu Asp Leu Ser Leu Thr Lys
 35 40 45
 Val Asn Ala Thr Glu Pro Glu Arg Thr Ala Met Lys Lys Ile Gln Asp
 50 55 60
 Cys Tyr Val Glu Asn Gly Leu Ile Ser Arg Val Leu Asp Gly Leu Val
 65 70 75 80
 Met Thr Thr Ile Ser Ser Ser Lys Asp Cys Met Gly Glu Ala Val Gln
 85 90 95
 Asn Thr Val Glu Asp Leu Lys Leu Asn Thr Leu Gly Arg
 100 105

<210> 99
 <211> 113
 <212> PRT
 <213> Gadus callarias (Baltic cod)

<400> 99
 Ala Phe Lys Gly Ile Leu Ser Asn Ala Asp Ile Lys Ala Ala Glu Ala
 1 5 10 15

Ala Cys Phe Lys Glu Gly Ser Phe Asp Glu Asp Gly Phe Tyr Ala Lys
20 25 30
Val Gly Leu Asp Ala Phe Ser Ala Asp Glu Leu Lys Lys Leu Phe Lys
35 40 45
Ile Ala Asp Glu Asp Lys Glu Gly Phe Ile Glu Glu Asp Glu Leu Lys
50 55 60
Leu Phe Leu Ile Ala Phe Ala Ala Asp Leu Arg Ala Leu Thr Asp Ala
65 70 75 80
Glu Thr Lys Ala Phe Leu Lys Ala Gly Asp Ser Asp Gly Asp Gly Lys
85 90 95
Ile Gly Val Asp Glu Phe Gly Ala Leu Val Asp Lys Trp Gly Ala Lys
100 105 110
Gly

<210> 100
<211> 210
<212> PRT
<213> Gallus gallus (Chicken)

<400> 100
Met Ala Met Ala Gly Val Phe Val Leu Phe Ser Phe Val Leu Cys Gly
1 5 10 15
Phe Leu Pro Asp Ala Ala Phe Gly Ala Glu Val Asp Cys Ser Arg Phe
20 25 30
Pro Asn Ala Thr Asp Lys Glu Gly Lys Asp Val Leu Val Cys Asn Lys
35 40 45
Asp Leu Arg Pro Ile Cys Gly Thr Asp Gly Val Thr Tyr Thr Asn Asp
50 55 60
Cys Leu Leu Cys Ala Tyr Ser Ile Glu Phe Gly Thr Asn Ile Ser Lys
65 70 75 80
Glu His Asp Gly Glu Cys Lys Glu Thr Val Pro Met Asn Cys Ser Ser
85 90 95
Tyr Ala Asn Thr Thr Ser Glu Asp Gly Lys Val Met Val Leu Cys Asn
100 105 110
Arg Ala Phe Asn Pro Val Cys Gly Thr Asp Gly Val Thr Tyr Asp Asn
115 120 125
Glu Cys Leu Leu Cys Ala His Lys Val Glu Gln Gly Ala Ser Val Asp
130 135 140
Lys Arg His Asp Gly Gly Cys Arg Lys Glu Leu Ala Ala Val Ser Val
145 150 155 160
Asp Cys Ser Glu Tyr Pro Lys Pro Asp Cys Thr Ala Glu Asp Arg Pro
165 170 175
Leu Cys Gly Ser Asp Asn Lys Thr Tyr Gly Asn Lys Cys Asn Phe Cys
180 185 190
Asn Ala Val Val Glu Ser Asn Gly Thr Leu Thr Leu Ser His Phe Gly
195 200 205
Lys Cys
210

<210> 101
<211> 385
<212> PRT
<213> Gallus gallus (Chicken)

<400> 101
Gly Ser Ile Gly Ala Ala Ser Met Glu Phe Cys Phe Asp Val Phe Lys
1 5 10 15
Glu Leu Lys Val His His Ala Asn Glu Asn Ile Phe Tyr Cys Pro Ile

Glu	Arg	Ile	Ser	Leu	Thr	Cys	Val	Gln	Lys	Ala	Thr	Tyr	Leu	Asp	Cys
50						55					60				
Ile	Lys	Ala	Ile	Ala	Asn	Asn	Glu	Ala	Asp	Ala	Ile	Ser	Leu	Asp	Gly
65					70					75					80
Gly	Gln	Ala	Phe	Glu	Ala	Gly	Leu	Ala	Pro	Tyr	Lys	Leu	Lys	Pro	Ile
				85					90					95	
Ala	Ala	Glu	Val	Tyr	Glu	His	Thr	Glu	Gly	Ser	Thr	Thr	Ser	Tyr	Tyr
			100					105					110		
Ala	Val	Ala	Val	Val	Lys	Lys	Gly	Thr	Glu	Phe	Thr	Val	Asn	Asp	Leu
		115					120					125			
Gln	Gly	Lys	Thr	Ser	Cys	His	Thr	Gly	Leu	Gly	Arg	Ser	Ala	Gly	Trp
	130					135					140				
Asn	Ile	Pro	Ile	Gly	Thr	Leu	Leu	His	Arg	Gly	Ala	Ile	Glu	Trp	Glu
145					150					155					160
Gly	Ile	Glu	Ser	Gly	Ser	Val	Glu	Gln	Ala	Val	Ala	Lys	Phe	Phe	Ser
				165					170					175	
Ala	Ser	Cys	Val	Pro	Gly	Ala	Thr	Ile	Glu	Gln	Lys	Leu	Cys	Arg	Gln
			180					185					190		
Cys	Lys	Gly	Asp	Pro	Lys	Thr	Lys	Cys	Ala	Arg	Asn	Ala	Pro	Tyr	Ser
		195					200					205			
Gly	Tyr	Ser	Gly	Ala	Phe	His	Cys	Leu	Lys	Asp	Gly	Lys	Gly	Asp	Val
	210					215					220				
Ala	Phe	Val	Lys	His	Thr	Thr	Val	Asn	Glu	Asn	Ala	Pro	Asp	Gln	Lys
225					230					235					240
Asp	Glu	Tyr	Glu	Leu	Cys	Leu	Asp	Gly	Ser	Arg	Gln	Pro	Val	Asp	
			245					250					255		
Asn	Tyr	Lys	Thr	Cys	Asn	Trp	Ala	Arg	Val	Ala	Ala	His	Ala	Val	Val
			260					265					270		
Ala	Arg	Asp	Asp	Asn	Lys	Val	Glu	Asp	Ile	Trp	Ser	Phe	Leu	Ser	Lys
		275					280					285			
Ala	Gln	Ser	Asp	Phe	Gly	Val	Asp	Thr	Lys	Ser	Asp	Phe	His	Leu	Phe
	290					295					300				
Gly	Pro	Pro	Gly	Lys	Lys	Asp	Pro	Val	Leu	Lys	Asp	Leu	Leu	Phe	Lys
305				310						315					320
Asp	Ser	Ala	Ile	Met	Leu	Lys	Arg	Val	Pro	Ser	Leu	Met	Asp	Ser	Gln
			325					330					335		
Leu	Tyr	Leu	Gly	Phe	Glu	Tyr	Tyr	Ser	Ala	Ile	Gln	Ser	Met	Arg	Lys
		340						345					350		
Asp	Gln	Leu	Thr	Pro	Ser	Pro	Arg	Glu	Asn	Arg	Ile	Gln	Trp	Cys	Ala
		355					360					365			
Val	Gly	Lys	Asp	Glu	Lys	Ser	Lys	Cys	Asp	Arg	Trp	Ser	Val	Val	Ser
	370					375					380				
Asn	Gly	Asp	Val	Glu	Cys	Thr	Val	Val	Asp	Glu	Thr	Lys	Asp	Cys	Ile
385					390					395					400
Ile	Lys	Ile	Met	Lys	Gly	Glu	Ala	Asp	Ala	Val	Ala	Leu	Asp	Gly	Gly
			405					410						415	
Leu	Val	Tyr	Thr	Ala	Gly	Val	Cys	Gly	Leu	Val	Pro	Val	Met	Ala	Glu
		420						425					430		
Arg	Tyr	Asp	Asp	Glu	Ser	Gln	Cys	Ser	Lys	Thr	Asp	Glu	Arg	Pro	Ala
		435					440					445			
Ser	Tyr	Phe	Ala	Val	Ala	Val	Ala	Arg	Lys	Asp	Ser	Asn	Val	Asn	Trp
	450					455					460				
Asn	Asn	Leu	Lys	Gly	Lys	Lys	Ser	Cys	His	Thr	Ala	Val	Gly	Arg	Thr
465					470					475					480
Ala	Gly	Trp	Val	Ile	Pro	Met	Gly	Leu	Ile	His	Asn	Arg	Thr	Gly	Thr
			485					490						495	
Cys	Asn	Phe	Asp	Glu	Tyr	Phe	Ser	Glu	Gly	Cys	Ala	Pro	Gly	Ser	Pro
			500					505					510		
Pro	Asn	Ser	Arg	Leu	Cys	Gln	Leu	Cys	Gln	Gly	Ser	Gly	Gly	Ile	Pro
	515						520					525			
Pro	Glu	Lys	Cys	Val	Ala	Ser	Ser	His	Glu	Lys	Tyr	Phe	Gly	Tyr	Thr

530		535		540
Gly Ala Leu Arg Cys	Leu Val Glu Lys Gly	Asp Val Ala Phe Ile Gln		
545	550	555		560
His Ser Thr Val Glu	Glu Asn Thr Gly Gly	Lys Asn Lys Ala Asp Trp		
	565	570		575
Ala Lys Asn Leu Gln	Met Asp Asp Phe	Glu Leu Leu Cys Thr Asp Gly		
	580	585		590
Arg Arg Ala Asn Val	Met Asp Tyr Arg	Glu Cys Asn Leu Ala Glu Val		
	595	600		605
Pro Thr His Ala Val	Val Val Arg Pro	Glu Lys Ala Asn Lys Ile Arg		
	610	615		620
Asp Leu Leu Glu Arg	Gln Glu Lys Arg	Phe Gly Val Asn Gly Ser Glu		
625	630	635		640
Lys Ser Lys Phe Met	Met Phe Glu Ser	Gln Asn Lys Asp Leu Leu Phe		
	645	650		655
Lys Asp Leu Thr Lys	Cys Leu Phe Lys	Val Arg Glu Gly Thr Thr Tyr		
	660	665		670
Lys Glu Phe Leu Gly	Asp Lys Phe Tyr	Thr Val Ile Ser Ser Leu Lys		
	675	680		685
Thr Cys Asn Pro Ser	Asp Ile Leu Gln	Met Cys Ser Phe Leu Glu Gly		
	690	695		700
Lys				
705				

<210> 103
 <211> 147
 <212> PRT
 <213> Gallus gallus (Chicken)

<400> 103
Met Arg Ser Leu Leu Ile Leu Val Leu Cys Phe Leu Pro Leu Ala Ala
1 5 10 15
Leu Gly Lys Val Phe Gly Arg Cys Glu Leu Ala Ala Ala Met Lys Arg
20 25 30
His Gly Leu Asp Asn Tyr Arg Gly Tyr Ser Leu Gly Asn Trp Val Cys
35 40 45
Ala Ala Lys Phe Glu Ser Asn Phe Asn Thr Gln Ala Thr Asn Arg Asn
50 55 60
Thr Asp Gly Ser Thr Asp Tyr Gly Ile Leu Gln Ile Asn Ser Arg Trp
65 70 75 80
Trp Cys Asn Asp Gly Arg Thr Pro Gly Ser Arg Asn Leu Cys Asn Ile
85 90 95
Pro Cys Ser Ala Leu Leu Ser Ser Asp Ile Thr Ala Ser Val Asn Cys
100 105 110
Ala Lys Lys Ile Val Ser Asp Gly Asn Gly Met Asn Ala Trp Val Ala
115 120 125
Trp Arg Asn Arg Cys Lys Gly Thr Asp Val Gln Ala Trp Ile Arg Gly
130 135 140
Cys Arg Leu
145

<210> 104
 <211> 133
 <212> PRT
 <213> Helianthus annuus (Common sunflower)

<400> 104
Met Ser Trp Gln Ala Tyr Val Asp Glu His Leu Met Cys Asp Ile Glu
1 5 10 15

Gly Thr Gly Gln His Leu Thr Ser Ala Ala Ile Leu Gly Leu Asp Gly
 20 25 30
 Thr Val Trp Ala Gln Ser Ala Lys Phe Pro Gln Phe Lys Pro Glu Glu
 35 40 45
 Met Lys Gly Ile Ile Lys Glu Phe Asp Glu Ala Gly Thr Leu Ala Pro
 50 55 60
 Thr Gly Met Phe Ile Ala Gly Ala Lys Tyr Met Val Leu Gln Gly Glu
 65 70 75 80
 Pro Gly Ala Val Ile Arg Gly Lys Lys Gly Ala Gly Gly Ile Cys Ile
 85 90 95
 Lys Lys Thr Gly Gln Ala Met Ile Met Gly Ile Tyr Asp Glu Pro Val
 100 105 110
 Ala Pro Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu
 115 120 125
 Leu Glu Gln Gly Met
 130

<210> 105
 <211> 137
 <212> PRT
 <213> Hevea brasiliensis (Para rubber tree)

<400> 105
 Ala Glu Asp Glu Asp Asn Gln Gln Gly Gln Gly Glu Gly Leu Lys Tyr
 1 5 10 15
 Leu Gly Phe Val Gln Asp Ala Ala Thr Tyr Ala Val Thr Thr Phe Ser
 20 25 30
 Asn Val Tyr Leu Phe Ala Lys Asp Lys Ser Gly Pro Leu Gln Pro Gly
 35 40 45
 Val Asp Ile Ile Glu Gly Pro Val Lys Asn Val Ala Val Pro Leu Tyr
 50 55 60
 Asn Arg Phe Ser Tyr Ile Pro Asn Gly Ala Leu Lys Phe Val Asp Ser
 65 70 75 80
 Thr Val Val Ala Ser Val Thr Ile Ile Asp Arg Ser Leu Pro Pro Ile
 85 90 95
 Val Lys Asp Ala Ser Ile Gln Val Val Ser Ala Ile Arg Ala Ala Pro
 100 105 110
 Glu Ala Ala Arg Ser Leu Ala Ser Ser Leu Pro Gly Gln Thr Lys Ile
 115 120 125
 Leu Ala Lys Val Phe Tyr Gly Glu Asn
 130 135

<210> 106
 <211> 150
 <212> PRT
 <213> Hevea brasiliensis (Para rubber tree)

<400> 106
 Ala Ser Val Glu Val Glu Ser Ala Ala Thr Ala Leu Pro Lys Asn Glu
 1 5 10 15
 Thr Pro Glu Val Thr Lys Ala Glu Glu Thr Lys Thr Glu Glu Pro Ala
 20 25 30
 Ala Pro Pro Ala Ser Glu Gln Glu Thr Ala Asp Ala Thr Pro Glu Lys
 35 40 45
 Glu Glu Pro Thr Ala Ala Pro Ala Glu Pro Glu Ala Pro Ala Pro Glu
 50 55 60
 Thr Glu Lys Ala Glu Glu Val Glu Lys Ile Glu Lys Thr Glu Glu Pro
 65 70 75 80
 Ala Pro Glu Ala Asp Gln Thr Thr Pro Glu Glu Lys Pro Ala Glu Pro

				85					90					95			
Glu	Pro	Val	Ala	Glu	Glu	Glu	Pro	Lys	His	Glu	Thr	Lys	Glu	Thr	Glu		
			100					105					110				
Thr	Glu	Ala	Pro	Ala	Ala	Pro	Ala	Glu	Gly	Glu	Lys	Pro	Ala	Glu	Glu		
		115					120					125					
Glu	Lys	Pro	Ile	Thr	Glu	Ala	Ala	Glu	Thr	Ala	Thr	Thr	Glu	Val	Pro		
	130					135					140						
Val	Glu	Lys	Thr	Glu	Glu												
145					150												

<210> 107
 <211> 265
 <212> PRT
 <213> Holcus lanatus (Velvet grass)

<400> 107																	
Met	Ala	Ser	Ser	Ser	Arg	Ser	Val	Leu	Leu	Leu	Val	Ala	Ala	Leu	Phe		
1				5					10					15			
Ala	Val	Phe	Leu	Gly	Ser	Ala	His	Gly	Ile	Ala	Lys	Val	Pro	Pro	Gly		
		20						25					30				
Pro	Asn	Ile	Thr	Ala	Thr	Tyr	Gly	Asp	Glu	Trp	Leu	Asp	Ala	Lys	Ser		
	35					40					45						
Thr	Trp	Tyr	Gly	Lys	Pro	Thr	Gly	Ala	Gly	Pro	Lys	Asp	Asn	Gly	Gly		
	50					55					60						
Ala	Cys	Gly	Tyr	Lys	Asp	Val	Asp	Lys	Pro	Pro	Phe	Ser	Gly	Met	Thr		
65				70					75					80			
Gly	Cys	Gly	Asn	Thr	Pro	Ile	Phe	Lys	Asp	Gly	Arg	Gly	Cys	Gly	Ser		
			85					90					95				
Cys	Phe	Glu	Ile	Lys	Cys	Thr	Lys	Pro	Glu	Ser	Cys	Ser	Gly	Glu	Pro		
		100						105					110				
Val	Thr	Val	His	Ile	Thr	Asp	Asp	Asn	Glu	Glu	Pro	Ile	Ala	Pro	Tyr		
		115				120						125					
His	Phe	Asp	Leu	Ser	Gly	His	Ala	Phe	Gly	Ser	Met	Ala	Lys	Lys	Gly		
	130				135						140						
Glu	Glu	Gln	Lys	Leu	Arg	Ser	Ala	Gly	Glu	Leu	Glu	Leu	Lys	Phe	Arg		
145				150					155					160			
Arg	Val	Lys	Cys	Lys	Tyr	Pro	Asp	Gly	Thr	Lys	Pro	Thr	Phe	His	Val		
			165					170					175				
Glu	Lys	Gly	Ser	Asn	Pro	Asn	Tyr	Leu	Ala	Leu	Leu	Val	Lys	Tyr	Ile		
			180					185					190				
Asp	Gly	Asp	Gly	Asp	Val	Val	Ala	Val	Asp	Ile	Lys	Glu	Lys	Gly	Lys		
		195				200						205					
Asp	Lys	Trp	Ile	Glu	Leu	Lys	Glu	Ser	Trp	Gly	Ala	Val	Trp	Arg	Val		
	210					215					220						
Asp	Thr	Pro	Asp	Lys	Leu	Thr	Gly	Pro	Phe	Thr	Val	Arg	Tyr	Thr	Thr		
225				230					235					240			
Glu	Gly	Gly	Thr	Lys	Gly	Glu	Ala	Glu	Asp	Val	Ile	Pro	Glu	Gly	Trp		
			245					250						255			
Lys	Ala	Asp	Thr	Ala	Tyr	Glu	Ala	Lys									
		260						265									

<210> 108
 <211> 146
 <212> PRT
 <213> Hordeum vulgare (Barley)

<400> 108																	
Pro	Thr	Ser	Val	Ala	Val	Asp	Gln	Gly	Ser	Met	Val	Ser	Asn	Ser	Pro		
1				5					10					15			

Gly	Glu	Trp	Cys	Trp	Pro	Gly	Met	Gly	Tyr	Pro	Val	Tyr	Pro	Phe	Pro
			20					25					30		
Arg	Cys	Arg	Ala	Leu	Val	Lys	Ser	Gln	Cys	Ala	Gly	Gly	Gln	Val	Val
	35						40					45			
Glu	Ser	Ile	Gln	Lys	Asp	Cys	Cys	Arg	Gln	Ile	Ala	Ala	Ile	Gly	Asp
	50					55					60				
Glu	Trp	Cys	Ile	Cys	Gly	Ala	Leu	Gly	Ser	Met	Arg	Gly	Ser	Met	Tyr
65					70					75					80
Lys	Glu	Leu	Gly	Val	Ala	Leu	Ala	Asp	Asp	Lys	Ala	Thr	Val	Ala	Glu
				85					90					95	
Val	Phe	Pro	Gly	Cys	Arg	Thr	Glu	Val	Met	Asp	Arg	Ala	Val	Ala	Ser
			100					105					110		
Leu	Pro	Ala	Val	Cys	Asn	Gln	Tyr	Ile	Pro	Asn	Thr	Asn	Gly	Thr	Asp
	115						120					125			
Gly	Val	Cys	Tyr	Trp	Leu	Ser	Tyr	Tyr	Gln	Pro	Pro	Arg	Gln	Met	Ser
	130					135					140				
Ser	Arg														
145															

<210> 109

<211> 367

<212> PRT

<213> Juniperus ashei (Ozark white cedar)

<400> 109

Met	Ala	Ser	Pro	Cys	Leu	Ile	Ala	Val	Leu	Val	Phe	Leu	Cys	Ala	Ile
1				5					10					15	
Val	Ser	Cys	Tyr	Ser	Asp	Asn	Pro	Ile	Asp	Ser	Cys	Trp	Arg	Gly	Asp
			20					25					30		
Ser	Asn	Trp	Asp	Gln	Asn	Arg	Met	Lys	Leu	Ala	Asp	Cys	Ala	Val	Gly
	35						40					45			
Phe	Gly	Ser	Ser	Thr	Met	Gly	Gly	Lys	Gly	Gly	Asp	Phe	Tyr	Thr	Val
	50					55					60				
Thr	Ser	Thr	Asp	Asp	Asn	Pro	Val	Asn	Pro	Thr	Pro	Gly	Thr	Leu	Arg
65				70						75					80
Tyr	Gly	Ala	Thr	Arg	Glu	Lys	Ala	Leu	Trp	Ile	Ile	Phe	Ser	Gln	Asn
				85					90					95	
Met	Asn	Ile	Lys	Leu	Lys	Met	Pro	Leu	Tyr	Val	Ala	Gly	His	Lys	Thr
			100					105					110		
Ile	Asp	Gly	Arg	Gly	Ala	Asp	Val	His	Leu	Gly	Asn	Gly	Gly	Pro	Cys
	115						120					125			
Leu	Phe	Met	Arg	Lys	Val	Ser	His	Val	Ile	Leu	His	Ser	Leu	His	Ile
	130					135					140				
His	Gly	Cys	Asn	Thr	Ser	Val	Leu	Gly	Asp	Val	Leu	Val	Ser	Glu	Ser
145				150						155					160
Ile	Gly	Val	Glu	Pro	Val	His	Ala	Gln	Asp	Gly	Asp	Ala	Ile	Thr	Met
			165						170					175	
Arg	Asn	Val	Thr	Asn	Ala	Trp	Ile	Asp	His	Asn	Ser	Leu	Ser	Asp	Cys
			180					185					190		
Ser	Asp	Gly	Leu	Ile	Asp	Val	Thr	Leu	Gly	Ser	Thr	Gly	Ile	Thr	Ile
	195						200					205			
Ser	Asn	Asn	His	Phe	Phe	Asn	His	His	Lys	Val	Met	Leu	Leu	Gly	His
	210					215					220				
Asp	Asp	Thr	Tyr	Asp	Asp	Asp	Lys	Ser	Met	Lys	Val	Thr	Val	Ala	Phe
225				230						235					240
Asn	Gln	Phe	Gly	Pro	Asn	Ala	Gly	Gln	Arg	Met	Pro	Arg	Ala	Arg	Tyr
			245						250					255	
Gly	Leu	Val	His	Val	Ala	Asn	Asn	Asn	Tyr	Asp	Pro	Trp	Asn	Ile	Tyr
	260							265					270		
Ala	Ile	Gly	Gly	Ser	Ser	Asn	Pro	Thr	Ile	Leu	Ser	Glu	Gly	Asn	Ser

Asp	Ile	Thr	Gly	Cys	Ser	Gly	Asp	Thr	Cys	Val	Ile	His	Arg	Gly	Glu
		35					40					45			
Lys	Met	Thr	Leu	Glu	Ala	Lys	Phe	Ala	Ala	Asn	Gln	Asp	Thr	Ala	Lys
	50					55					60				
Val	Thr	Ile	Lys	Val	Leu	Ala	Lys	Val	Ala	Gly	Thr	Thr	Ile	Gln	Val
65					70					75				80	
Pro	Gly	Leu	Glu	Thr	Asp	Gly	Cys	Lys	Phe	Ile	Lys	Cys	Pro	Val	Lys
				85					90					95	
Lys	Gly	Glu	Ala	Leu	Asp	Phe	Ile	Tyr	Ser	Gly	Thr	Ile	Pro	Ala	Ile
			100					105					110		
Thr	Pro	Lys	Val	Lys	Ala	Asp	Val	Thr	Ala	Glu	Leu	Ile	Gly	Asp	His
		115					120					125			
Gly	Val	Met	Ala	Cys	Gly	Thr	Val	His	Gly	Gln	Val	Glu			
	130						135					140			

<210> 112

<211> 263

<212> PRT

<213> Lolium perenne (Perennial ryegrass)

<400> 112

Met	Ala	Ser	Ser	Ser	Val	Leu	Leu	Val	Val	Ala	Leu	Phe	Ala	Val
1				5				10					15	
Phe	Leu	Gly	Ser	Ala	His	Gly	Ile	Ala	Lys	Val	Pro	Pro	Gly	Pro
			20					25					30	Asn
Ile	Thr	Ala	Glu	Tyr	Gly	Asp	Lys	Trp	Leu	Asp	Ala	Lys	Ser	Thr
		35					40					45		Trp
Tyr	Gly	Lys	Pro	Thr	Gly	Ala	Gly	Pro	Lys	Asp	Asn	Gly	Gly	Ala
	50					55					60			Cys
Gly	Tyr	Lys	Asn	Val	Asp	Lys	Ala	Pro	Phe	Asn	Gly	Met	Thr	Gly
65					70					75				80
Gly	Asn	Thr	Pro	Ile	Phe	Lys	Asp	Gly	Arg	Gly	Cys	Gly	Ser	Cys
				85					90					95
Glu	Ile	Lys	Cys	Thr	Lys	Pro	Glu	Ser	Cys	Ser	Gly	Glu	Ala	Val
			100					105					110	Thr
Val	Thr	Ile	Thr	Asp	Asp	Asn	Glu	Glu	Pro	Ile	Ala	Pro	Tyr	His
		115					120					125		Phe
Asp	Leu	Ser	Gly	His	Ala	Phe	Gly	Ser	Met	Ala	Lys	Lys	Gly	Glu
	130					135					140			Glu
Gln	Asn	Val	Arg	Ser	Ala	Gly	Glu	Leu	Glu	Leu	Gln	Phe	Arg	Arg
145					150					155				Val
Lys	Cys	Lys	Tyr	Pro	Asp	Asp	Thr	Lys	Pro	Thr	Phe	His	Val	Glu
				165					170					175
Ala	Ser	Asn	Pro	Asn	Tyr	Leu	Ala	Ile	Leu	Val	Lys	Tyr	Val	Asp
			180					185					190	Gly
Asp	Gly	Asp	Val	Val	Ala	Val	Asp	Ile	Lys	Glu	Lys	Gly	Lys	Asp
		195					200					205		Lys
Trp	Ile	Glu	Leu	Lys	Glu	Ser	Trp	Gly	Ala	Val	Trp	Arg	Ile	Asp
	210					215					220			Thr
Pro	Asp	Lys	Leu	Thr	Gly	Pro	Phe	Thr	Val	Arg	Tyr	Thr	Thr	Glu
225					230					235				240
Gly	Thr	Lys	Ser	Glu	Phe	Glu	Asp	Val	Ile	Pro	Glu	Gly	Trp	Lys
				245					250					255
Asp	Thr	Ser	Tyr	Ser	Ala	Lys								
			260											

<210> 113

<211> 97

<212> PRT

<213> Lolium perenne (Perennial ryegrass)

<400> 113

Ala	Ala	Pro	Val	Glu	Phe	Thr	Val	Glu	Lys	Gly	Ser	Asp	Glu	Lys	Asn
1				5					10					15	
Leu	Ala	Leu	Ser	Ile	Lys	Tyr	Asn	Lys	Glu	Gly	Asp	Ser	Met	Ala	Glu
			20					25					30		
Val	Glu	Leu	Lys	Glu	His	Gly	Ser	Asn	Glu	Trp	Leu	Ala	Leu	Lys	Lys
			35				40					45			
Asn	Gly	Asp	Gly	Val	Trp	Glu	Ile	Lys	Ser	Asp	Lys	Pro	Leu	Lys	Gly
	50					55				60					
Pro	Phe	Asn	Phe	Arg	Phe	Val	Ser	Glu	Lys	Gly	Met	Arg	Asn	Val	Phe
65					70					75					80
Asp	Asp	Val	Val	Pro	Ala	Asp	Phe	Lys	Val	Gly	Thr	Thr	Tyr	Lys	Pro
				85					90					95	
Glu															

<210> 114

<211> 97

<212> PRT

<213> Lolium perenne (Perennial ryegrass)

<400> 114

Thr	Lys	Val	Asp	Leu	Thr	Val	Glu	Lys	Gly	Ser	Asp	Ala	Lys	Thr	Leu
1				5					10					15	
Val	Leu	Asn	Ile	Lys	Tyr	Thr	Arg	Pro	Gly	Asp	Thr	Leu	Ala	Glu	Val
			20					25				30			
Glu	Leu	Arg	Gln	His	Gly	Ser	Glu	Glu	Trp	Glu	Pro	Met	Thr	Lys	Lys
		35				40					45				
Gly	Asn	Leu	Trp	Glu	Val	Lys	Ser	Ala	Lys	Pro	Leu	Thr	Gly	Pro	Met
	50					55				60					
Asn	Phe	Arg	Phe	Leu	Ser	Lys	Gly	Gly	Met	Lys	Asn	Val	Phe	Asp	Glu
65					70					75					80
Val	Ile	Pro	Thr	Ala	Phe	Thr	Val	Gly	Lys	Thr	Tyr	Thr	Pro	Glu	Tyr
				85					90					95	
Asn															

<210> 115

<211> 308

<212> PRT

<213> Lolium perenne (Perennial ryegrass)

<400> 115

Met	Ala	Val	Gln	Lys	Tyr	Thr	Val	Ala	Leu	Phe	Leu	Arg	Arg	Gly	Pro
1				5					10					15	
Arg	Gly	Gly	Pro	Gly	Arg	Ser	Tyr	Ala	Ala	Asp	Ala	Gly	Tyr	Thr	Pro
			20					25				30			
Ala	Ala	Ala	Ala	Thr	Pro	Ala	Thr	Pro	Ala	Ala	Thr	Pro	Ala	Gly	Gly
		35				40					45				
Trp	Arg	Glu	Gly	Asp	Asp	Arg	Arg	Ala	Glu	Ala	Ala	Gly	Gly	Arg	Gln
	50					55				60					
Arg	Leu	Ala	Ser	Arg	Gln	Pro	Trp	Pro	Pro	Leu	Pro	Thr	Pro	Leu	Arg
65					70					75					80
Arg	Thr	Ser	Ser	Arg	Ser	Ser	Arg	Pro	Pro	Ser	Pro	Ser	Pro	Pro	Arg
				85					90					95	
Ala	Ser	Ser	Pro	Thr	Ser	Ala	Ala	Lys	Ala	Pro	Gly	Leu	Ile	Pro	Lys
			100					105					110		

Leu Asp Thr Ala Tyr Asp Val Ala Tyr Lys Ala Ala Glu Ala His Pro
 115 120 125
 Arg Gly Gln Val Arg Arg Leu Arg His Cys Pro His Arg Ser Leu Arg
 130 135 140
 Val Ile Ala Gly Ala Leu Glu Val His Ala Val Lys Pro Ala Thr Glu
 145 150 155 160
 Glu Val Leu Ala Ala Lys Ile Pro Thr Gly Glu Leu Gln Ile Val Asp
 165 170 175
 Lys Ile Asp Ala Ala Phe Lys Ile Ala Ala Thr Ala Ala Asn Ala Ala
 180 185 190
 Pro Thr Asn Asp Lys Phe Thr Val Phe Glu Ser Ala Phe Asn Lys Ala
 195 200 205
 Leu Asn Glu Cys Thr Gly Gly Ala Met Arg Pro Thr Ser Ser Ser Pro
 210 215 220
 Pro Ser Arg Pro Arg Ser Ser Arg Pro Thr Pro Pro Ser Pro Ala
 225 230 235 240
 Ala Pro Glu Val Lys Tyr Ala Val Phe Glu Ala Ala Leu Thr Lys Ala
 245 250 255
 Ile Thr Ala Met Thr Gln Ala Gln Lys Ala Gly Lys Pro Ala Ala Ala
 260 265 270
 Ala Ala Thr Ala Ala Ala Thr Val Ala Thr Ala Ala Ala Thr Ala Ala
 275 280 285
 Ala Val Leu Pro Pro Pro Leu Leu Val Val Gln Ser Leu Ile Ser Leu
 290 295 300
 Leu Ile Tyr Tyr
 305

<210> 116
 <211> 339
 <212> PRT
 <213> Lolium perenne (Perennial ryegrass)

<400> 116
 Met Ala Val Gln Lys His Thr Val Ala Leu Phe Leu Ala Val Ala Leu
 1 5 10 15
 Val Ala Gly Pro Ala Ala Ser Tyr Ala Ala Asp Ala Gly Tyr Ala Pro
 20 25 30
 Ala Thr Pro Ala Thr Pro Ala Ala Pro Ala Thr Ala Ala Thr Pro Ala
 35 40 45
 Thr Pro Ala Thr Pro Ala Thr Pro Ala Ala Val Pro Ser Gly Lys Ala
 50 55 60
 Thr Thr Glu Glu Gln Lys Leu Ile Glu Lys Ile Asn Ala Gly Phe Lys
 65 70 75 80
 Ala Ala Val Ala Ala Ala Val Val Pro Pro Ala Asp Lys Tyr Lys
 85 90 95
 Thr Phe Val Glu Thr Phe Gly Thr Ala Thr Asn Lys Ala Phe Val Glu
 100 105 110
 Gly Leu Ala Ser Gly Tyr Ala Asp Gln Ser Lys Asn Gln Leu Thr Ser
 115 120 125
 Lys Leu Asp Ala Ala Leu Lys Leu Ala Tyr Glu Ala Ala Gln Gly Ala
 130 135 140
 Thr Pro Glu Ala Lys Tyr Asp Ala Tyr Val Ala Thr Leu Thr Glu Ala
 145 150 155 160
 Leu Arg Val Ile Ala Gly Thr Leu Glu Val His Ala Val Lys Pro Ala
 165 170 175
 Ala Glu Glu Val Lys Val Gly Ala Ile Pro Ala Ala Glu Val Gln Leu
 180 185 190
 Ile Asp Lys Val Asp Ala Ala Tyr Arg Thr Ala Ala Thr Ala Ala Asn
 195 200 205
 Ala Ala Pro Ala Asn Asp Lys Phe Thr Val Phe Glu Asn Thr Phe Asn

210	215	220
Asn Ala Ile Lys Val Ser Leu Gly Ala Ala Tyr Asp Ser Tyr Lys Phe		
225	230	235
Ile Pro Thr Leu Val Ala Ala Val Lys Gln Ala Tyr Ala Ala Lys Gln		240
	245	250
Ala Thr Ala Pro Glu Val Lys Tyr Thr Val Ser Glu Thr Ala Leu Lys		255
	260	265
Lys Ala Val Thr Ala Met Ser Glu Ala Glu Lys Glu Ala Thr Pro Ala		270
	275	280
Ala Ala Ala Thr Ala Thr Pro Thr Pro Ala Ala Ala Thr Ala Thr Ala		285
	290	295
Thr Pro Ala Ala Ala Tyr Ala Thr Ala Thr Pro Ala Ala Ala Thr Ala		300
305	310	315
Thr Ala Thr Pro Ala Ala Thr Ala Thr Pro Ala Ala Ala Gly Gly		320
	325	330
		335
Tyr Lys Val		

<210> 117
 <211> 158
 <212> PRT
 <213> *Malus domestica* (Apple) (*Malus sylvestris*)

<400> 117
Gly Val Tyr Thr Phe Glu Asn Glu Phe Thr Ser Glu Ile Pro Pro Ser
1 5 10 15
Arg Leu Phe Lys Ala Phe Val Leu Asp Ala Asp Asn Leu Ile Pro Lys
20 25 30
Ile Ala Pro Gln Ala Ile Lys Gln Ala Glu Ile Leu Glu Gly Asn Gly
35 40 45
Gly Pro Gly Thr Ile Lys Lys Ile Thr Phe Gly Glu Gly Ser Gln Tyr
50 55 60
Gly Tyr Val Lys His Arg Ile Asp Ser Ile Asp Glu Ala Ser Tyr Ser
65 70 75 80
Tyr Ser Tyr Thr Leu Ile Glu Gly Asp Ala Leu Thr Asp Thr Ile Glu
85 90 95
Lys Ile Ser Tyr Glu Thr Lys Leu Val Ala Cys Gly Ser Gly Ser Thr
100 105 110
Ile Lys Ser Ile Ser His Tyr His Thr Lys Gly Asn Ile Glu Ile Lys
115 120 125
Glu Glu His Val Lys Val Gly Lys Glu Lys Ala His Gly Leu Phe Lys
130 135 140
Leu Ile Glu Ser Tyr Leu Lys Asp His Pro Asp Ala Tyr Asn
145 150 155

<210> 118
 <211> 133
 <212> PRT
 <213> *Mercurialis annua* (Annual mercury)

<400> 118
Met Ser Trp Gln Thr Tyr Val Asp Asp His Leu Met Cys Asp Ile Asp
1 5 10 15
Gly Gln Gly Gln His Leu Ala Ala Ala Ser Ile Val Gly His Asp Gly
20 25 30
Ser Ile Trp Ala Gln Ser Ala Ser Phe Pro Gln Leu Lys Pro Glu Glu
35 40 45
Ile Thr Gly Ile Met Lys Asp Phe Asp Glu Pro Gly His Leu Ala Pro
50 55 60

Thr Gly Leu Tyr Ile Ala Gly Thr Lys Tyr Met Val Ile Gln Gly Glu
 65 70 75 80
 Ser Gly Ala Val Ile Arg Gly Lys Lys Gly Ser Gly Gly Ile Thr Ile
 85 90 95
 Lys Lys Thr Gly Gln Ala Leu Val Phe Gly Ile Tyr Glu Glu Pro Val
 100 105 110
 Thr Pro Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu
 115 120 125
 Ile Glu Gln Gly Met
 130

<210> 119
 <211> 274
 <212> PRT
 <213> *Metapenaeus ensis* (Greasyback shrimp) (Sand shrimp)

<400> 119
 Met Lys Leu Glu Lys Asp Asn Ala Met Asp Arg Ala Asp Thr Leu Glu
 1 5 10 15
 Gln Gln Asn Lys Glu Ala Asn Asn Arg Ala Glu Lys Ser Glu Glu Glu
 20 25 30
 Val His Asn Leu Gln Lys Arg Met Gln Gln Leu Glu Asn Asp Leu Asp
 35 40 45
 Gln Val Gln Glu Ser Leu Leu Lys Ala Asn Asn Gln Leu Val Glu Lys
 50 55 60
 Asp Lys Ala Leu Ser Asn Ala Glu Gly Glu Val Ala Ala Leu Asn Arg
 65 70 75 80
 Arg Ile Gln Leu Leu Glu Glu Asp Leu Glu Arg Ser Glu Glu Arg Leu
 85 90 95
 Asn Thr Ala Thr Thr Lys Leu Ala Glu Ala Ser Gln Ala Ala Asp Glu
 100 105 110
 Ser Glu Arg Met Arg Lys Val Leu Glu Asn Arg Ser Leu Ser Asp Glu
 115 120 125
 Glu Arg Met Asp Ala Leu Glu Asn Gln Leu Lys Glu Ala Arg Phe Leu
 130 135 140
 Ala Glu Glu Ala Asp Arg Lys Tyr Asp Glu Val Ala Arg Lys Leu Ala
 145 150 155 160
 Met Val Glu Ala Asp Leu Glu Arg Ala Glu Glu Arg Ala Glu Thr Gly
 165 170 175
 Glu Ser Lys Ile Val Glu Leu Glu Glu Leu Arg Val Val Gly Asn
 180 185 190
 Asn Leu Lys Ser Leu Glu Val Ser Glu Glu Lys Ala Asn Gln Arg Glu
 195 200 205
 Glu Ala Tyr Lys Lys Glu Gln Ile Lys Thr Leu Thr Asn Lys Leu Lys Ala
 210 215 220
 Ala Glu Ala Arg Ala Glu Phe Ala Glu Arg Ser Val Gln Lys Leu Gln
 225 230 235 240
 Lys Glu Val Asp Arg Leu Glu Asp Glu Leu Val Asn Glu Lys Glu Lys
 245 250 255
 Tyr Lys Ser Ile Thr Asp Glu Leu Asp Gln Thr Phe Ser Glu Leu Ser
 260 265 270
 Gly Tyr

<210> 120
 <211> 180
 <212> PRT
 <213> *Mus musculus* (Mouse)

<400> 120

Met	Lys	Met	Leu	Leu	Leu	Leu	Cys	Leu	Gly	Leu	Thr	Leu	Val	Cys	Val
1				5					10					15	
His	Ala	Glu	Glu	Ala	Ser	Ser	Thr	Gly	Arg	Asn	Phe	Asn	Val	Glu	Lys
		20						25					30		
Ile	Asn	Gly	Glu	Trp	His	Thr	Ile	Ile	Leu	Ala	Ser	Asp	Lys	Arg	Glu
	35						40					45			
Lys	Ile	Glu	Asp	Asn	Gly	Asn	Phe	Arg	Leu	Phe	Leu	Glu	Gln	Ile	His
	50					55					60				
Val	Leu	Glu	Asn	Ser	Leu	Val	Leu	Lys	Phe	His	Thr	Val	Arg	Asp	Glu
65					70					75					80
Glu	Cys	Ser	Glu	Leu	Ser	Met	Val	Ala	Asp	Lys	Thr	Glu	Lys	Ala	Gly
			85						90					95	
Glu	Tyr	Ser	Val	Thr	Tyr	Asp	Gly	Phe	Asn	Thr	Phe	Thr	Ile	Pro	Lys
			100					105					110		
Thr	Asp	Tyr	Asp	Asn	Phe	Leu	Met	Ala	His	Leu	Ile	Asn	Glu	Lys	Asp
	115						120					125			
Gly	Glu	Thr	Phe	Gln	Leu	Met	Gly	Leu	Tyr	Gly	Arg	Glu	Pro	Asp	Leu
	130					135					140				
Met	Ser	Asp	Ile	Lys	Glu	Arg	Phe	Ala	Gln	Leu	Cys	Glu	Glu	His	Gly
145					150					155					160
Ile	Leu	Arg	Glu	Asn	Ile	Ile	Asp	Leu	Ser	Asn	Ala	Asn	Arg	Cys	Leu
				165					170					175	
Gln	Ala	Arg	Glu												
			180												

<210> 121

<211> 112

<212> PRT

<213> Myrmecia pilosula (Bulldog ant) (Australian jumpe

<400> 121

Met	Lys	Leu	Ser	Cys	Leu	Leu	Leu	Thr	Leu	Thr	Ile	Ile	Phe	Val	Leu
1				5					10					15	
Thr	Ile	Val	His	Ala	Pro	Asn	Val	Glu	Ala	Lys	Asp	Leu	Ala	Asp	Pro
			20					25					30		
Glu	Ser	Glu	Ala	Val	Gly	Phe	Ala	Asp	Ala	Phe	Gly	Glu	Ala	Asp	Ala
	35						40					45			
Val	Gly	Glu	Ala	Asp	Pro	Asn	Ala	Gly	Leu	Gly	Ser	Val	Phe	Gly	Arg
	50					55					60				
Leu	Ala	Arg	Ile	Leu	Gly	Arg	Val	Ile	Pro	Lys	Val	Ala	Lys	Lys	Leu
65					70					75					80
Gly	Pro	Lys	Val	Ala	Lys	Val	Leu	Pro	Lys	Val	Met	Lys	Glu	Ala	Ile
				85					90					95	
Pro	Met	Ala	Val	Glu	Met	Ala	Lys	Ser	Gln	Glu	Glu	Gln	Gln	Pro	Gln
			100					105					110		

<210> 122

<211> 75

<212> PRT

<213> Myrmecia pilosula (Bulldog ant) (Australian jumpe

<400> 122

Met	Lys	Leu	Ser	Cys	Leu	Leu	Leu	Thr	Leu	Ala	Ile	Ile	Phe	Val	Leu
1				5					10					15	
Thr	Ile	Val	His	Ala	Pro	Asn	Val	Glu	Ala	Lys	Ala	Leu	Ala	Asp	Pro
			20					25					30		
Glu	Ser	Asp	Ala	Val	Gly	Phe	Ala	Asp	Ala	Val	Gly	Glu	Ala	Asp	Pro
		35					40					45			

Ile Asp Trp Lys Lys Val Asp Trp Lys Lys Val Ser Lys Lys Thr Cys
 50 55 60
 Lys Val Met Leu Lys Ala Cys Lys Phe Leu Gly
 65 70 75

<210> 123
 <211> 145
 <212> PRT
 <213> Olea europaea (Common olive)

<400> 123
 Glu Asp Ile Pro Gln Pro Pro Val Ser Gln Phe His Ile Gln Gly Gln
 1 5 10 15
 Val Tyr Cys Asp Thr Cys Arg Ala Gly Phe Ile Thr Glu Leu Ser Glu
 20 25 30
 Phe Ile Pro Gly Ala Ser Leu Arg Leu Gln Cys Lys Asp Lys Glu Asn
 35 40 45
 Gly Asp Val Thr Phe Thr Glu Val Gly Tyr Thr Arg Ala Glu Gly Leu
 50 55 60
 Tyr Ser Met Leu Val Glu Arg Asp His Lys Asn Glu Phe Cys Glu Ile
 65 70 75 80
 Thr Leu Ile Ser Ser Gly Arg Lys Asp Cys Asn Glu Ile Pro Thr Glu
 85 90 95
 Gly Trp Ala Lys Pro Ser Leu Lys Phe Lys Leu Asn Thr Val Asn Gly
 100 105 110
 Thr Thr Arg Thr Val Asn Pro Leu Gly Phe Phe Lys Lys Glu Ala Leu
 115 120 125
 Pro Lys Cys Ala Gln Val Tyr Asn Lys Leu Gly Met Tyr Pro Pro Asn
 130 135 140
 Met
 145

<210> 124
 <211> 24
 <212> PRT
 <213> Olea europaea (Common olive)

<400> 124
 Ala Phe Ala Asn Thr Gly Val Glu Ile Val Ser Ile Asp Thr Tyr Leu
 1 5 10 15
 Phe Ser Leu Tyr Asp Glu Asp Lys
 20

<210> 125
 <211> 29
 <212> PRT
 <213> Olea europaea (Common olive)

<400> 125
 Val Lys Ala Val Thr Val Leu Asn Ser Ser Glu Gly Pro His Gly Ile
 1 5 10 15
 Val Tyr Phe Ala Gln Glu Gly Asp Gly Pro Thr Thr Val
 20 25

<210> 126
 <211> 19
 <212> PRT

<213> Olea europaea (Common olive)

<220>

<221> UNSURE

<222> 14, 16

<223> Xaa = any amino acid

<400> 126

Ala	Pro	Ser	Gln	Gly	Thr	Val	Thr	Ala	Lys	Leu	Thr	Ser	Xaa	Val	Xaa
1				5					10					15	
Tyr	Lys	Asp													

<210> 127

<211> 263

<212> PRT

<213> Oryza sativa (Rice)

<400> 127

Met	Ala	Ser	Ser	Ser	Leu	Leu	Leu	Ala	Cys	Val	Val	Val	Ala	Ala	Met
1				5					10					15	
Val	Ser	Pro	Ser	Pro	Ala	Gly	His	Pro	Lys	Val	Pro	Pro	Gly	Pro	Asn
			20					25					30		
Ile	Thr	Thr	Ser	Tyr	Gly	Asp	Lys	Trp	Leu	Glu	Ala	Arg	Pro	Pro	Gly
		35					40					45			
Met	Val	Arg	Pro	Arg	Val	Leu	Ala	Pro	Lys	Asp	Asn	Gly	Gly	Ala	Cys
	50					55					60				
Gly	Tyr	Lys	Asp	Val	Asp	Lys	Ala	Pro	Phe	Leu	Gly	Met	Asn	Ser	Cys
65					70					75					80
Gly	Asn	Asp	Pro	Ile	Phe	Lys	Asp	Gly	Lys	Gly	Cys	Gly	Ser	Cys	Phe
				85					90					95	
Glu	Ile	Lys	Cys	Ser	Lys	Pro	Glu	Ala	Cys	Ser	Asp	Lys	Pro	Ala	Leu
			100					105					110		
Ile	His	Val	Thr	Asp	Met	Asn	Asp	Glu	Pro	Ile	Ala	Ala	Tyr	His	Phe
		115					120					125			
Asp	Leu	Ser	Gly	Leu	Ala	Met	Ala	Lys	Asp	Gly	Lys	Asp	Glu	Glu	Leu
	130					135						140			
Arg	Lys	Ala	Gly	Ile	Ile	Asp	Thr	Gln	Phe	Arg	Arg	Val	Lys	Cys	Lys
145					150					155					160
Tyr	Pro	Ala	Asp	Thr	Lys	Ile	Thr	Phe	His	Ile	Glu	Lys	Ala	Ser	Asn
				165					170					175	
Pro	Asn	Tyr	Leu	Ala	Leu	Leu	Val	Lys	Tyr	Val	Ala	Gly	Asp	Gly	Asp
			180					185					190		
Val	Val	Glu	Val	Glu	Ile	Lys	Glu	Lys	Gly	Ser	Glu	Glu	Trp	Lys	Ala
		195					200					205			
Leu	Lys	Glu	Ser	Trp	Gly	Ala	Ile	Trp	Arg	Ile	Asp	Thr	Pro	Lys	Pro
	210					215					220				
Leu	Lys	Gly	Pro	Phe	Ser	Val	Arg	Val	Thr	Thr	Glu	Gly	Ala	Arg	Arg
225					230					235					240
Ser	Ser	Ala	Glu	Asp	Ala	Ile	Pro	Asp	Pro	Gly	Arg	Arg	Gln	Arg	Val
				245					250					255	
Gln	Val	Asn	Val	Gln	Ala	Lys									
				260											

<210> 128

<211> 139

<212> PRT

<213> Parietaria judaica

<400> 128

Gln Glu Thr Cys Gly Thr Met Val Arg Ala Leu Met Pro Cys Leu Pro
1 5 10 15
Phe Val Gln Gly Lys Glu Lys Glu Pro Ser Lys Gly Cys Cys Ser Gly
20 25 30
Ala Lys Arg Leu Asp Gly Glu Thr Lys Thr Gly Pro Gln Arg Val His
35 40 45
Ala Cys Glu Cys Ile Gln Thr Ala Met Lys Thr Tyr Ser Asp Ile Asp
50 55 60
Gly Lys Leu Val Ser Glu Val Pro Lys His Cys Gly Ile Val Asp Ser
65 70 75 80
Lys Leu Pro Pro Ile Asp Val Asn Met Asp Cys Lys Thr Val Gly Val
85 90 95
Val Pro Arg Gln Pro Gln Leu Pro Val Ser Leu Arg His Gly Pro Val
100 105 110
Thr Gly Pro Ser Asp Pro Ala His Lys Ala Arg Leu Glu Arg Pro Gln
115 120 125
Ile Arg Val Pro Pro Pro Ala Pro Glu Lys Ala
130 135

<210> 129

<211> 176

<212> PRT

<213> Parietaria judaica

<400> 129

Met Arg Thr Val Ser Ala Pro Ser Ala Val Ala Leu Val Val Ile Val
1 5 10 15
Ala Ala Gly Leu Ala Trp Thr Ser Leu Ala Ser Val Ala Pro Pro Ala
20 25 30
Pro Ala Pro Gly Ser Glu Glu Thr Cys Gly Thr Val Val Arg Ala Leu
35 40 45
Met Pro Cys Leu Pro Phe Val Gln Gly Lys Glu Lys Glu Pro Ser Lys
50 55 60
Gly Cys Cys Ser Gly Ala Lys Arg Leu Asp Gly Glu Thr Lys Thr Gly
65 70 75 80
Leu Gln Arg Val His Ala Cys Glu Cys Ile Gln Thr Ala Met Lys Thr
85 90 95
Tyr Ser Asp Ile Asp Gly Lys Leu Val Ser Glu Val Pro Lys His Cys
100 105 110
Gly Ile Val Asp Ser Lys Leu Pro Pro Ile Asp Val Asn Met Asp Cys
115 120 125
Lys Thr Leu Gly Val Val Pro Arg Gln Pro Gln Leu Pro Val Ser Leu
130 135 140
Arg His Gly Pro Val Thr Gly Pro Ser Asp Pro Ala His Lys Ala Arg
145 150 155 160
Leu Glu Arg Pro Gln Ile Arg Val Pro Pro Ala Pro Glu Lys Ala
165 170 175

<210> 130

<211> 138

<212> PRT

<213> Parietaria judaica

<400> 130

Met Arg Thr Val Ser Ala Arg Ser Ser Val Ala Leu Val Val Ile Val
1 5 10 15
Ala Ala Val Leu Val Trp Thr Ser Ser Ala Ser Val Ala Pro Ala Pro
20 25 30

Ala	Pro	Gly	Ser	Glu	Glu	Thr	Cys	Gly	Thr	Val	Val	Gly	Ala	Leu	Met
		35					40					45			
Pro	Cys	Leu	Pro	Phe	Val	Gln	Gly	Lys	Glu	Lys	Glu	Pro	Ser	Lys	Gly
	50					55					60				
Cys	Cys	Ser	Gly	Ala	Lys	Arg	Leu	Asp	Gly	Glu	Thr	Lys	Thr	Gly	Pro
65					70					75					80
Gln	Arg	Val	His	Ala	Cys	Glu	Cys	Ile	Gln	Thr	Ala	Met	Lys	Thr	Tyr
				85					90					95	
Ser	Asp	Ile	Asp	Gly	Lys	Leu	Val	Ser	Glu	Val	Pro	Lys	His	Cys	Gly
			100					105					110		
Ile	Val	Asp	Ser	Lys	Leu	Pro	Pro	Ile	Asp	Val	Asn	Met	Asp	Cys	Lys
		115				120						125			
Thr	Leu	Gly	Val	Leu	His	Tyr	Lys	Gly	Asn						
	130					135									

<210> 131
 <211> 133
 <212> PRT
 <213> Parietaria judaica

Met	Arg	Thr	Val	Ser	Met	Ala	Ala	Leu	Val	Val	Ile	Ala	Ala	Ala	Leu
1				5					10					15	
Ala	Trp	Thr	Ser	Ser	Ala	Glu	Pro	Ala	Pro	Ala	Pro	Ala	Pro	Gly	Glu
			20					25					30		
Glu	Ala	Cys	Gly	Lys	Val	Val	Gln	Asp	Ile	Met	Pro	Cys	Leu	His	Phe
		35					40					45			
Val	Lys	Gly	Glu	Glu	Lys	Glu	Pro	Ser	Lys	Glu	Cys	Cys	Ser	Gly	Thr
	50					55					60				
Lys	Lys	Leu	Ser	Glu	Glu	Val	Lys	Thr	Thr	Glu	Gln	Lys	Arg	Glu	Ala
65					70					75					80
Cys	Lys	Cys	Ile	Val	Arg	Ala	Thr	Lys	Gly	Ile	Ser	Gly	Ile	Lys	Asn
				85					90					95	
Glu	Leu	Val	Ala	Glu	Val	Pro	Lys	Lys	Cys	Asp	Ile	Lys	Thr	Thr	Leu
			100					105					110		
Pro	Pro	Ile	Thr	Ala	Asp	Phe	Asp	Cys	Ser	Lys	Ile	Gln	Ser	Thr	Ile
		115					120					125			
Phe	Arg	Gly	Tyr	Tyr											
	130														

<210> 132
 <211> 133
 <212> PRT
 <213> Parietaria judaica

Met	Arg	Thr	Val	Ser	Met	Ala	Ala	Leu	Val	Val	Ile	Ala	Ala	Ala	Leu
1				5					10					15	
Ala	Trp	Thr	Ser	Ser	Ala	Glu	Leu	Ala	Ser	Ala	Pro	Ala	Pro	Gly	Glu
			20					25					30		
Gly	Pro	Cys	Gly	Lys	Val	Val	His	His	Ile	Met	Pro	Cys	Leu	Lys	Phe
		35					40					45			
Val	Lys	Gly	Glu	Glu	Lys	Glu	Pro	Ser	Lys	Ser	Cys	Cys	Ser	Gly	Thr
	50					55					60				
Lys	Lys	Leu	Ser	Glu	Glu	Val	Lys	Thr	Thr	Glu	Gln	Lys	Arg	Glu	Ala
65					70					75					80
Cys	Lys	Cys	Ile	Val	Ala	Ala	Thr	Lys	Gly	Ile	Ser	Gly	Ile	Lys	Asn
				85					90					95	
Glu	Leu	Val	Ala	Glu	Val	Pro	Lys	Lys	Cys	Gly	Ile	Thr	Thr	Thr	Leu

			100					105					110			
Pro	Pro	Ile	Thr	Ala	Asp	Phe	Asp	Cys	Ser	Lys	Ile	Glu	Ser	Thr	Ile	
		115					120					125				
Phe	Arg	Gly	Tyr	Tyr												
	130															

<210> 133
 <211> 269
 <212> PRT
 <213> Phalaris aquatica (Canary grass)

<400> 133																
Met	Met	Lys	Met	Val	Cys	Ser	Ser	Ser	Ser	Ser	Ser	Leu	Leu	Val	Val	
1				5					10					15		
Ala	Ala	Leu	Leu	Ala	Val	Phe	Val	Gly	Ser	Ala	Gln	Gly	Ile	Ala	Lys	
		20						25					30			
Val	Pro	Pro	Gly	Pro	Asn	Ile	Thr	Ala	Glu	Tyr	Gly	Asp	Lys	Trp	Leu	
	35					40						45				
Asp	Ala	Lys	Ser	Thr	Trp	Tyr	Gly	Lys	Pro	Thr	Gly	Ala	Gly	Pro	Lys	
	50					55					60					
Asp	Asn	Gly	Gly	Ala	Cys	Gly	Tyr	Lys	Asp	Val	Asp	Lys	Ala	Pro	Phe	
65					70					75					80	
Asn	Gly	Met	Thr	Gly	Cys	Gly	Asn	Thr	Pro	Ile	Phe	Lys	Asp	Gly	Arg	
			85						90					95		
Gly	Cys	Gly	Ser	Cys	Phe	Glu	Leu	Lys	Cys	Ser	Lys	Pro	Glu	Ser	Cys	
			100					105					110			
Ser	Gly	Glu	Pro	Ile	Thr	Val	His	Ile	Thr	Asp	Asp	Asn	Glu	Glu	Pro	
	115						120					125				
Ile	Ala	Pro	Tyr	His	Phe	Asp	Leu	Ser	Gly	His	Ala	Phe	Gly	Ser	Met	
	130					135					140					
Ala	Lys	Lys	Gly	Glu	Glu	Asn	Val	Arg	Gly	Ala	Gly	Glu	Leu	Glu		
145					150				155					160		
Leu	Gln	Phe	Arg	Arg	Val	Lys	Cys	Lys	Tyr	Pro	Asp	Gly	Thr	Lys	Pro	
			165						170					175		
Thr	Phe	His	Val	Glu	Lys	Gly	Ser	Asn	Pro	Asn	Tyr	Leu	Ala	Leu	Leu	
			180					185					190			
Val	Lys	Tyr	Val	Asp	Gly	Asp	Gly	Asp	Val	Val	Ala	Val	Asp	Ile	Lys	
	195					200						205				
Glu	Lys	Gly	Lys	Asp	Lys	Trp	Ile	Glu	Leu	Lys	Glu	Ser	Trp	Gly	Ala	
	210					215					220					
Ile	Trp	Arg	Ile	Asp	Thr	Pro	Asp	Lys	Leu	Thr	Gly	Pro	Phe	Thr	Val	
225					230					235					240	
Arg	Tyr	Thr	Thr	Glu	Gly	Gly	Thr	Lys	Ala	Glu	Phe	Glu	Asp	Val	Ile	
			245					250						255		
Pro	Glu	Gly	Trp	Lys	Ala	Asp	Thr	His	Asp	Ala	Ser	Lys				
		260						265								

<210> 134
 <211> 320
 <212> PRT
 <213> Phalaris aquatica (Canary grass)

<400> 134																
Met	Ala	Val	Gln	Lys	Tyr	Thr	Met	Ala	Leu	Phe	Leu	Ala	Val	Ala	Leu	
1				5					10					15		
Val	Ala	Gly	Pro	Ala	Ala	Pro	Thr	Pro	Pro	Thr	Pro	Arg	Thr	Pro	Pro	
		20						25					30			
Leu	Leu	Pro	Pro	Pro	Arg	Ala	Arg	Asp	Lys	Ala	Thr	Leu	Thr	Ser	Arg	
		35					40					45				

Ser	Val	Glu	Asp	Ile	Asn	Ala	Ala	Ser	Arg	Arg	Pro	Trp	Trp	Ala	Ser
50						55					60				
Val	Pro	Pro	Ala	Asp	Lys	Phe	Lys	Thr	Phe	Ala	Asp	His	Val	Leu	Cys
65					70					75					80
Val	Pro	Asn	Ala	Asp	Val	Thr	Ser	Ala	Ala	Thr	Lys	Ala	Pro	Gln	Leu
				85					90					95	
Lys	Ala	Lys	Leu	Asp	Ala	Ala	Tyr	Arg	Val	Ala	Tyr	Glu	Ala	Ala	Glu
			100					105					110		
Gly	Ser	Thr	Pro	Glu	Ala	Lys	Tyr	Asp	Ala	Phe	Ile	Ala	Ala	Leu	Thr
		115					120					125			
Glu	Ala	Leu	Arg	Val	Ile	Ala	Gly	Ala	Phe	Glu	Val	His	Ala	Val	Lys
		130				135					140				
Pro	Ala	Thr	Glu	Glu	Val	Val	Ala	Asp	Pro	Val	Gly	Glu	Leu	Gln	Ile
145					150					155					160
Val	Asp	Lys	Ile	Asp	Ala	Ala	Phe	Lys	Ile	Ala	Ala	Thr	Ala	Ala	Asn
				165					170					175	
Ser	Ala	Pro	Ala	Asn	Asp	Lys	Phe	Thr	Val	Phe	Glu	Gly	Ala	Phe	Asn
			180					185					190		
Lys	Ala	Ile	Lys	Glu	Ser	Thr	Ala	Gly	Ala	Tyr	Glu	Thr	Tyr	Lys	Phe
		195					200					205			
Ile	Pro	Ser	Leu	Glu	Ala	Ala	Val	Lys	Gln	Ala	Tyr	Gly	Ala	Thr	Val
	210					215					220				
Ala	Arg	Ala	Pro	Glu	Val	Lys	Tyr	Ala	Val	Phe	Glu	Ala	Gly	Leu	Thr
225					230					235					240
Lys	Ala	Ile	Thr	Ala	Met	Ser	Glu	Ala	Gln	Lys	Val	Ala	Lys	Pro	Pro
				245					250					255	
Leu	Ser	Pro	Gln	Pro	Pro	Gln	Val	Leu	Pro	Leu	Ala	Ala	Gly	Gly	Ala
			260					265					270		
Ala	Thr	Val	Ala	Ala	Ala	Ser	Asp	Val	Arg	Val	Cys	Arg	Ser	His	Gly
		275					280					285			
Thr	Leu	Gln	Asp	Ala	Cys	Leu	Leu	Arg	Cys	Arg	Gly	Gly	Cys	Gln	Pro
	290					295					300				
Val	Val	Trp	Arg	Gly	Gly	Ser	His	Arg	Ala	Arg	Gly	Gly	Tyr	Lys	Val
305					310					315					320

<210> 135
 <211> 305
 <212> PRT
 <213> Phalaris aquatica (Canary grass)

Met	Ala	Val	Gln	Lys	Tyr	Thr	Val	Ala	Leu	Phe	Leu	Ala	Val	Ala	Leu
1				5					10					15	
Val	Ala	Gly	Pro	Ala	Ala	Leu	Tyr	Ala	Gly	Asp	Gly	Tyr	Ala	Pro	Ala
			20					25					30		
Thr	Pro	Ala	Ala	Ser	Ala	Thr	Leu	Ala	Thr	Pro	Ala	Thr	Pro	Ala	Ala
		35					40					45			
Ser	Pro	Gln	His	Ala	Gly	Thr	Thr	Glu	Tyr	His	Ile	Val	Arg	Lys	Ala
	50					55					60				
Gly	Leu	Asn	Glu	Glu	Lys	Asn	Ala	Ala	Arg	Gln	Thr	Asp	Asp	Glu	Gln
65					70					75					80
Lys	Arg	Ser	Asp	Glu	Ile	Asn	Cys	Pro	Asp	Phe	Asn	Lys	Ser	Val	His
				85					90					95	
Cys	Arg	Ala	Asp	Arg	Leu	Pro	Val	Cys	Ser	Ser	Thr	Ser	Ala	His	Ser
			100					105					110		
Ser	Lys	Gln	Asp	Val	Ala	Trp	Met	Leu	Gly	Tyr	Gly	Ser	Ile	Gln	Gly
		115					120					125			
Phe	Ser	Met	Asp	Asp	Ala	Ser	Val	Gly	Ser	Val	Ser	Ser	Glu	Phe	His
	130					135					140				
Val	Ile	Glu	Ser	Ala	Ile	Glu	Val	Ile	Thr	Tyr	Ile	Gly	Glu	Glu	Val

145					150					155				160
Lys	Val	Ile	Pro	Ala	Gly	Glu	Val	Glu	Val	Ile	Asn	Lys	Val	Lys
				165					170					175
Ala	Phe	Ser	Thr	Ala	Ala	Thr	Ala	Ala	Asp	Glu	Ala	Pro	Ala	Asn
			180					185					190	Asp
Lys	Phe	Thr	Val	Phe	Val	Ser	Ser	Phe	Asn	Lys	Ala	Ile	Lys	Glu
		195					200					205		Thr
Thr	Gly	Gly	Ala	Tyr	Ala	Gly	Tyr	Lys	Phe	Ile	Pro	Thr	Leu	Glu
	210					215					220			Ala
Ala	Val	Lys	Gln	Ala	Tyr	Ala	Ala	Ser	Ser	Ala	Thr	Ala	Pro	Glu
225					230					235				240
Lys	Tyr	Ala	Val	Phe	Glu	Thr	Ala	Leu	Lys	Lys	Ala	Ile	Ser	Ala
				245					250					255
Ser	Glu	Ala	Gln	Lys	Glu	Ala	Lys	Pro	Ala	Ala	Ala	Ile	Ser	Ala
			260					265					270	Ala
Thr	Thr	Thr	Ile	Ser	Ala	Ser	Thr	Ala	Thr	Pro	Ala	Ala	Pro	Pro
		275					280						285	Pro
Pro	Gln	Leu	Gly	Thr	Ala	Thr	Pro	Ala	Ala	Val	Ala	Gly	Gly	Tyr
	290					295					300			Lys
Val														
305														

<210> 136
 <211> 294
 <212> PRT
 <213> Phalaris aquatica (Canary grass)

<400> 136														
Met	Ala	Val	Gln	Lys	Tyr	Thr	Val	Ala	Leu	Phe	Leu	Ala	Met	Ala
1				5					10					15
Val	Ala	Gly	Pro	Ala	Ala	Ser	Tyr	Ala	Ala	Asp	Ala	Gly	Thr	Pro
			20					25					30	Pro
Thr	Pro	Ala	Thr	Pro	Ala	Val	Pro	Gly	Ala	Ala	Ala	Gly	Lys	Ala
		35					40					45		Thr
Thr	His	Glu	Gln	Lys	Leu	Ile	Glu	Asp	Ile	Asn	Ala	Ala	Phe	Lys
	50					55				60				Trp
Trp	Pro	Ala	Ser	Ala	Pro	Pro	Ala	Asp	Lys	Tyr	Lys	Thr	Phe	Glu
65					70				75					80
Ala	Phe	Ser	Lys	Ala	Asn	Ile	Ala	Gly	Ala	Ser	Thr	Lys	Gly	Leu
				85				90						95
Ala	Ala	Tyr	Ser	Val	Val	Tyr	Asn	Thr	Ala	Ala	Gly	Ala	Thr	Pro
			100					105					110	Glu
Ala	Lys	Tyr	Asp	Ser	Phe	Val	Thr	Ala	Leu	Thr	Glu	Ala	Leu	Arg
		115					120				125			Ile
Met	Ala	Gly	Thr	Leu	Glu	Val	His	Ala	Val	Lys	Pro	Ala	Thr	Glu
	130					135					140			Glu
Glu	Val	Pro	Ser	Ala	Lys	Ile	Leu	Arg	Ala	Asn	Ser	Arg	Ser	Ser
145					150					155				160
Arg	Ser	Ser	Arg	Phe	Lys	Ile	Ala	Ala	Thr	Val	Ala	Thr	Pro	Leu
				165					170					175
His	Ser	Thr	Ala	Ala	Asn	Ser	Ala	Pro	Ala	Asn	Asp	Lys	Phe	Thr
			180					185					190	Val
Phe	Glu	Gly	Ala	Phe	Asn	Lys	Ala	Ile	Lys	Glu	Arg	His	Gly	Gly
	195						200					205		Pro
Thr	Glu	Thr	Tyr	Lys	Phe	Ile	Pro	Ser	Leu	Glu	Ala	Ala	Val	Lys
	210					215					220			Gln
Ala	Tyr	Gly	Ala	Thr	Val	Ala	Arg	Ala	Pro	Glu	Val	Lys	Tyr	Ala
225					230					235				240
Phe	Glu	Ala	Gly	Leu	Thr	Lys	Ala	Ile	Thr	Ala	Met	Ser	Glu	Ala
				245					250					255

Lys Val Ala Lys Pro Val Arg Leu Ser Pro Gln Pro Pro Gln Val Leu
 260 265 270
 Pro Leu Ala Ala Gly Gly Ala Ala Thr Val Ala Ala Ala Ser Asp Ser
 275 280 285
 Arg Gly Gly Tyr Lys Val
 290

<210> 137
 <211> 175
 <212> PRT
 <213> *Phalaris aquatica* (Canary grass)

<400> 137
 Ala Lys Tyr Asp Ala Phe Ile Ala Ala Leu Thr Glu Ala Leu Arg Val
 1 5 10 15
 Ile Ala Gly Ala Phe Glu Val His Ala Val Lys Pro Ala Thr Glu Glu
 20 25 30
 Val Pro Ala Ala Lys Ile Pro Ala Gly Glu Leu Gln Ile Val Asp Lys
 35 40 45
 Ile Asp Ala Ala Phe Lys Ile Ala Ala Thr Ala Ala Asn Ser Ala Pro
 50 55 60
 Ala Asn Asp Lys Phe Thr Val Phe Glu Gly Ala Phe Asn Lys Ala Ile
 65 70 75 80
 Lys Glu Arg His Gly Glu Ala Tyr Glu Thr Tyr Lys Phe Ile Pro Ser
 85 90 95
 Leu Glu Ala Ser Arg Ser Lys Gln Ala Tyr Gly Ala Thr Val Ala Arg
 100 105 110
 Ala Pro Glu Val Lys Tyr Ala Val Phe Glu Ala Gly Leu Thr Lys Ala
 115 120 125
 Ile Thr Ala Met Ser Glu Ala Gln Lys Val Ala Lys Pro Val Arg Ser
 130 135 140
 Val Thr Ala Ala Ala Ala Gly Ala Ala Thr Ala Ala Gly Gly Ala Ala
 145 150 155 160
 Thr Val Ala Ala Ser Arg Pro Thr Ser Ala Gly Gly Tyr Lys Val
 165 170 175

<210> 138
 <211> 263
 <212> PRT
 <213> *Phleum pratense* (Common timothy)

<400> 138
 Met Ala Ser Ser Ser Ser Val Leu Leu Val Val Val Leu Phe Ala Val
 1 5 10 15
 Phe Leu Gly Ser Ala Tyr Gly Ile Pro Lys Val Pro Pro Gly Pro Asn
 20 25 30
 Ile Thr Ala Thr Tyr Gly Asp Lys Trp Leu Asp Ala Lys Ser Thr Trp
 35 40 45
 Tyr Gly Lys Pro Thr Gly Ala Gly Pro Lys Asp Asn Gly Gly Ala Cys
 50 55 60
 Gly Tyr Lys Asp Val Asp Lys Pro Pro Phe Ser Gly Met Thr Gly Cys
 65 70 75 80
 Gly Asn Thr Pro Ile Phe Lys Ser Gly Arg Gly Cys Gly Ser Cys Phe
 85 90 95
 Glu Ile Lys Cys Thr Lys Pro Glu Ala Cys Ser Gly Glu Pro Val Val
 100 105 110
 Val His Ile Thr Asp Asp Asn Glu Glu Pro Ile Ala Pro Tyr His Phe
 115 120 125
 Asp Leu Ser Gly His Ala Phe Gly Ala Met Ala Lys Lys Gly Asp Glu

130		135		140
Gln Lys Leu Arg Ser Ala Gly Glu Leu Glu Leu Gln Phe Arg Arg Val				
145		150		155
Lys Cys Lys Tyr Pro Glu Gly Thr Lys Val Thr Phe His Val Glu Lys				160
	165		170	175
Gly Ser Asn Pro Asn Tyr Leu Ala Leu Val Lys Tyr Val Asn Gly				
	180		185	190
Asp Gly Asp Val Val Ala Val Asp Ile Lys Glu Lys Gly Lys Asp Lys				
	195	200		205
Trp Ile Glu Leu Lys Glu Ser Trp Gly Ala Ile Trp Arg Ile Asp Thr				
	210	215		220
Pro Asp Lys Leu Thr Gly Pro Phe Thr Val Arg Tyr Thr Thr Glu Gly				240
225		230		235
Gly Thr Lys Thr Glu Ala Glu Asp Val Ile Pro Glu Gly Trp Lys Ala				
	245		250	255
Asp Thr Ser Tyr Glu Ser Lys				
	260			

<210> 139
 <211> 122
 <212> PRT
 <213> Phleum pratense (Common timothy)

<400> 139
Met Ser Met Ala Ser Ser Ser Ser Ser Ser Leu Leu Ala Met Ala Val
1 5 10 15
Leu Ala Ala Leu Phe Ala Gly Ala Trp Cys Val Pro Lys Val Thr Phe
20 25 30
Thr Val Glu Lys Gly Ser Asn Glu Lys His Leu Ala Val Leu Val Lys
35 40 45
Tyr Glu Gly Asp Thr Met Ala Glu Val Glu Leu Arg Glu His Gly Ser
50 55 60
Asp Glu Trp Val Ala Met Thr Lys Gly Glu Gly Gly Val Trp Thr Phe
65 70 75 80
Asp Ser Glu Glu Pro Leu Gln Gly Pro Phe Asn Phe Arg Phe Leu Thr
85 90 95
Glu Lys Gly Met Lys Asn Val Phe Asp Asp Val Val Pro Glu Lys Tyr
100 105 110
Thr Ile Gly Ala Thr Tyr Ala Pro Glu Glu
115 120

<210> 140
 <211> 286
 <212> PRT
 <213> Phleum pratense (Common timothy)

<400> 140
Ala Asp Leu Gly Tyr Gly Pro Ala Thr Pro Ala Ala Pro Ala Ala Gly
1 5 10 15
Tyr Thr Pro Ala Thr Pro Ala Ala Pro Ala Gly Ala Asp Ala Ala Gly
20 25 30
Lys Ala Thr Thr Glu Glu Gln Lys Leu Ile Glu Lys Ile Asn Ala Gly
35 40 45
Phe Lys Ala Ala Leu Ala Gly Ala Gly Val Gln Pro Ala Asp Lys Tyr
50 55 60
Arg Thr Phe Val Ala Thr Phe Gly Pro Ala Ser Asn Lys Ala Phe Ala
65 70 75 80
Glu Gly Leu Ser Gly Glu Pro Lys Gly Ala Ala Glu Ser Ser Ser Lys
85 90 95

Ala	Ala	Leu	Thr	Ser	Lys	Leu	Asp	Ala	Ala	Tyr	Lys	Leu	Ala	Tyr	Lys
			100					105					110		
Thr	Ala	Glu	Gly	Ala	Thr	Pro	Glu	Ala	Lys	Tyr	Asp	Ala	Tyr	Val	Ala
		115					120					125			
Thr	Leu	Ser	Glu	Ala	Leu	Arg	Ile	Ile	Ala	Gly	Thr	Leu	Glu	Val	His
	130					135					140				
Ala	Val	Lys	Pro	Ala	Ala	Glu	Glu	Val	Lys	Val	Ile	Pro	Ala	Gly	Glu
145					150					155					160
Leu	Gln	Val	Ile	Glu	Lys	Val	Asp	Ala	Ala	Phe	Lys	Val	Ala	Ala	Thr
				165				170						175	
Ala	Ala	Asn	Ala	Ala	Pro	Ala	Asn	Asp	Lys	Phe	Thr	Val	Phe	Glu	Ala
			180					185					190		
Ala	Phe	Asn	Asp	Glu	Ile	Lys	Ala	Ser	Thr	Gly	Gly	Ala	Tyr	Glu	Ser
	195						200					205			
Tyr	Lys	Phe	Ile	Pro	Ala	Leu	Glu	Ala	Ala	Val	Lys	Gln	Ala	Tyr	Ala
	210					215					220				
Ala	Thr	Val	Ala	Thr	Ala	Pro	Glu	Val	Lys	Tyr	Thr	Val	Phe	Glu	Thr
225					230					235					240
Ala	Leu	Lys	Lys	Ala	Ile	Thr	Ala	Met	Ser	Glu	Ala	Gln	Lys	Ala	Ala
				245					250					255	
Lys	Pro	Ala	Ala	Ala	Ala	Thr	Ala	Thr	Ala	Thr	Ala	Ala	Val	Gly	Ala
			260				265						270		
Ala	Thr	Gly	Ala	Ala	Thr	Ala	Ala	Thr	Gly	Gly	Tyr	Lys	Val		
		275					280					285			

<210> 141

<211> 284

<212> PRT

<213> Phleum pratense (Common timothy)

<400> 141

Ala	Ala	Ala	Ala	Val	Pro	Arg	Arg	Gly	Pro	Arg	Gly	Gly	Pro	Gly	Arg
1				5					10					15	
Ser	Tyr	Thr	Ala	Asp	Ala	Gly	Tyr	Ala	Pro	Ala	Thr	Pro	Ala	Ala	Ala
			20					25					30		
Gly	Ala	Ala	Ala	Gly	Lys	Ala	Thr	Thr	Glu	Glu	Gln	Lys	Leu	Ile	Glu
		35				40						45			
Asp	Ile	Asn	Val	Gly	Phe	Lys	Ala	Ala	Val	Ala	Ala	Ala	Ala	Ser	Val
	50					55				60					
Pro	Ala	Ala	Asp	Lys	Phe	Lys	Thr	Phe	Glu	Ala	Ala	Phe	Thr	Ser	Ser
65					70				75					80	
Ser	Lys	Ala	Ala	Ala	Ala	Lys	Ala	Pro	Gly	Leu	Val	Pro	Lys	Leu	Asp
				85				90						95	
Ala	Ala	Tyr	Ser	Val	Ala	Tyr	Lys	Ala	Ala	Val	Gly	Ala	Thr	Pro	Glu
			100					105					110		
Ala	Lys	Phe	Asp	Ser	Phe	Val	Ala	Ser	Leu	Thr	Glu	Ala	Leu	Arg	Val
	115						120					125			
Ile	Ala	Gly	Ala	Leu	Glu	Val	His	Ala	Val	Lys	Pro	Val	Thr	Glu	Glu
	130					135					140				
Pro	Gly	Met	Ala	Lys	Ile	Pro	Ala	Gly	Glu	Leu	Gln	Ile	Ile	Asp	Lys
145					150					155					160
Ile	Asp	Ala	Ala	Phe	Lys	Val	Ala	Ala	Thr	Ala	Ala	Ala	Thr	Ala	Pro
				165					170					175	
Ala	Asp	Asp	Lys	Phe	Thr	Val	Phe	Glu	Ala	Ala	Phe	Asn	Lys	Ala	Ile
			180					185					190		
Lys	Glu	Ser	Thr	Gly	Gly	Ala	Tyr	Asp	Thr	Tyr	Lys	Cys	Ile	Pro	Ser
		195					200					205			
Leu	Glu	Ala	Ala	Val	Lys	Gln	Ala	Tyr	Ala	Ala	Thr	Val	Ala	Ala	Ala
	210					215					220				
Pro	Gln	Val	Lys	Tyr	Ala	Val	Phe	Glu	Ala	Ala	Leu	Thr	Lys	Ala	Ile

<210> 144
 <211> 131
 <212> PRT
 <213> Phleum pratense (Common timothy)

<400> 144
 Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Cys Glu Ile Glu
 1 5 10 15
 Gly His His Leu Ala Ser Ala Ala Ile Leu Gly His Asp Gly Thr Val
 20 25 30
 Trp Ala Gln Ser Ala Asp Phe Pro Gln Phe Lys Pro Glu Glu Ile Thr
 35 40 45
 Gly Ile Met Lys Asp Phe Asp Glu Pro Gly His Leu Ala Pro Thr Gly
 50 55 60
 Met Phe Val Ala Gly Ala Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
 65 70 75 80
 Ala Val Ile Arg Gly Lys Lys Gly Ala Gly Gly Ile Thr Ile Lys Lys
 85 90 95
 Thr Gly Gln Ala Leu Val Val Gly Ile Tyr Asp Glu Pro Met Thr Pro
 100 105 110
 Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu Val Glu
 115 120 125
 Gln Gly Met
 130

<210> 145
 <211> 131
 <212> PRT
 <213> Phleum pratense (Common timothy)

<400> 145
 Met Ser Trp Gln Thr Tyr Val Asp Glu His Leu Met Cys Glu Ile Glu
 1 5 10 15
 Gly His His Leu Ala Ser Ala Ala Ile Phe Gly His Asp Gly Thr Val
 20 25 30
 Trp Ala Gln Ser Ala Asp Phe Pro Gln Phe Lys Pro Glu Glu Ile Thr
 35 40 45
 Gly Ile Met Lys Asp Leu Asp Glu Pro Gly His Leu Ala Pro Thr Gly
 50 55 60
 Met Phe Val Ala Ala Ala Lys Tyr Met Val Ile Gln Gly Glu Pro Gly
 65 70 75 80
 Ala Val Ile Arg Gly Lys Lys Gly Ala Gly Gly Ile Thr Ile Lys Lys
 85 90 95
 Thr Gly Gln Ala Leu Val Val Gly Ile Tyr Asp Glu Pro Met Thr Pro
 100 105 110
 Gly Gln Cys Asn Met Val Val Glu Arg Leu Gly Asp Tyr Leu Val Glu
 115 120 125
 Gln Gly Met
 130

<210> 146
 <211> 373
 <212> PRT
 <213> Poa pratensis (Kentucky bluegrass)

<400> 146
 Met Asp Lys Ala Asn Gly Ala Tyr Lys Thr Ala Leu Lys Ala Ala Ser
 1 5 10 15
 Ala Val Ala Pro Ala Glu Lys Phe Pro Val Phe Gln Ala Thr Phe Asp

			20					25				30					
Lys	Asn	Leu	Lys	Glu	Gly	Leu	Ser	Gly	Pro	Asp	Ala	Val	Gly	Phe	Ala		
	35						40					45					
Lys	Lys	Leu	Asp	Ala	Phe	Ile	Gln	Thr	Ser	Tyr	Leu	Ser	Thr	Lys	Ala		
	50					55					60						
Ala	Glu	Pro	Lys	Glu	Lys	Phe	Asp	Leu	Phe	Val	Leu	Ser	Leu	Thr	Glu		
65				70						75					80		
Val	Leu	Arg	Phe	Met	Ala	Gly	Ala	Val	Lys	Ala	Pro	Pro	Ala	Ser	Lys		
				85					90					95			
Phe	Pro	Ala	Lys	Pro	Ala	Pro	Lys	Val	Ala	Ala	Tyr	Thr	Pro	Ala	Ala		
			100					105					110				
Pro	Ala	Gly	Ala	Ala	Pro	Lys	Ala	Thr	Thr	Asp	Glu	Gln	Lys	Leu	Ile		
	115					120						125					
Glu	Lys	Ile	Asn	Val	Gly	Phe	Lys	Ala	Ala	Val	Ala	Ala	Ala	Ala	Gly		
	130				135						140						
Val	Pro	Ala	Ala	Ser	Lys	Tyr	Lys	Thr	Phe	Val	Ala	Thr	Phe	Gly	Ala		
145				150						155					160		
Ala	Ser	Asn	Lys	Ala	Phe	Ala	Glu	Ala	Leu	Ser	Thr	Glu	Pro	Lys	Gly		
			165					170						175			
Ala	Ala	Val	Ala	Ser	Ser	Lys	Ala	Val	Leu	Thr	Ser	Lys	Leu	Asp	Ala		
		180						185					190				
Ala	Tyr	Lys	Leu	Ala	Tyr	Lys	Ser	Ala	Glu	Gly	Ala	Thr	Pro	Glu	Ala		
	195					200					205						
Lys	Tyr	Asp	Ala	Tyr	Val	Ala	Thr	Leu	Ser	Glu	Ala	Leu	Arg	Ile	Ile		
	210				215					220							
Ala	Gly	Thr	Leu	Glu	Val	His	Gly	Val	Lys	Pro	Ala	Ala	Glu	Glu	Val		
225				230					235					240			
Lys	Ala	Ile	Pro	Ala	Gly	Glu	Leu	Gln	Val	Ile	Asp	Lys	Val	Asp	Ala		
			245					250						255			
Ala	Phe	Lys	Val	Ala	Ala	Thr	Ala	Ala	Asn	Ala	Ala	Pro	Ala	Asn	Asp		
		260					265					270					
Lys	Phe	Thr	Val	Phe	Glu	Ala	Ala	Phe	Asn	Asp	Ala	Ile	Lys	Ala	Ser		
	275					280					285						
Thr	Gly	Gly	Ala	Tyr	Gln	Ser	Tyr	Lys	Phe	Ile	Pro	Ala	Leu	Glu	Ala		
	290				295					300							
Ala	Val	Lys	Gln	Ser	Tyr	Ala	Ala	Thr	Val	Ala	Thr	Ala	Pro	Ala	Val		
305				310					315					320			
Lys	Tyr	Thr	Val	Phe	Glu	Thr	Ala	Leu	Lys	Lys	Ala	Ile	Thr	Ala	Met		
			325					330					335				
Ser	Gln	Ala	Gln	Lys	Ala	Ala	Lys	Pro	Ala	Ala	Ala	Val	Thr	Gly	Thr		
		340					345					350					
Ala	Thr	Ser	Ala	Val	Gly	Ala	Ala	Thr	Gly	Ala	Ala	Thr	Ala	Ala	Ala		
	355					360						365					
Gly	Gly	Tyr	Lys	Val													
	370																

<210> 147

<211> 333

<212> PRT

<213> *Poa pratensis* (Kentucky bluegrass)

<400> 147

Met	Ala	Val	His	Gln	Tyr	Thr	Val	Ala	Leu	Phe	Leu	Ala	Val	Ala	Leu		
1			5					10					15				
Val	Ala	Gly	Pro	Ala	Ala	Ser	Tyr	Ala	Ala	Asp	Val	Gly	Tyr	Gly	Ala		
			20					25				30					
Pro	Ala	Thr	Leu	Ala	Thr	Pro	Ala	Thr	Pro	Ala	Ala	Pro	Ala	Ala	Gly		
	35					40					45						
Tyr	Thr	Pro	Ala	Ala	Pro	Ala	Gly	Ala	Ala	Pro	Lys	Ala	Thr	Thr	Asp		
	50					55					60						

Glu Gln Lys Leu Ile Glu Lys Ile Asn Ala Gly Phe Lys Ala Ala Val
 65 70 75 80
 Ala Ala Ala Ala Gly Val Pro Ala Val Asp Lys Tyr Lys Thr Phe Val
 85 90 95
 Ala Thr Phe Gly Thr Ala Ser Asn Lys Ala Phe Ala Glu Ala Leu Ser
 100 105 110
 Thr Glu Pro Lys Gly Ala Ala Ala Ser Ser Asn Ala Val Leu Thr
 115 120 125
 Ser Lys Leu Asp Ala Ala Tyr Lys Leu Ala Tyr Lys Ser Ala Glu Gly
 130 135 140
 Ala Thr Pro Glu Ala Lys Tyr Asp Ala Tyr Val Ala Thr Leu Ser Glu
 145 150 155 160
 Ala Leu Arg Ile Ile Ala Gly Thr Leu Glu Val His Ala Val Lys Pro
 165 170 175
 Ala Gly Glu Glu Val Lys Ala Ile Pro Ala Gly Glu Leu Gln Val Ile
 180 185 190
 Asp Lys Val Asp Ala Ala Phe Lys Val Ala Ala Thr Ala Ala Asn Ala
 195 200 205
 Ala Pro Ala Asn Asp Lys Phe Thr Val Phe Glu Ala Ala Phe Asn Asp
 210 215 220
 Ala Ile Lys Ala Ser Thr Gly Gly Ala Tyr Gln Ser Tyr Lys Phe Ile
 225 230 235 240
 Pro Ala Leu Glu Ala Ala Val Lys Gln Ser Tyr Ala Ala Thr Val Ala
 245 250 255
 Thr Ala Pro Ala Val Lys Tyr Thr Val Phe Glu Thr Ala Leu Lys Lys
 260 265 270
 Ala Ile Thr Ala Met Ser Gln Ala Gln Lys Ala Ala Lys Pro Ala Ala
 275 280 285
 Ala Val Thr Ala Thr Ala Thr Gly Ala Val Gly Ala Ala Thr Gly Ala
 290 295 300
 Val Gly Ala Ala Thr Gly Ala Ala Thr Ala Ala Gly Gly Tyr Lys
 305 310 315 320
 Thr Gly Ala Ala Thr Pro Thr Ala Gly Gly Tyr Lys Val
 325 330

<210> 148
 <211> 307
 <212> PRT
 <213> Poa pratensis (Kentucky bluegrass)

<400> 148
 Met Ala Val Gln Lys Tyr Thr Val Ala Leu Phe Leu Val Ala Leu Val
 1 5 10 15
 Val Gly Pro Ala Ala Ser Tyr Ala Ala Asp Leu Ser Tyr Gly Ala Pro
 20 25 30
 Ala Thr Pro Ala Ala Pro Ala Ala Gly Tyr Thr Pro Ala Ala Pro Ala
 35 40 45
 Gly Ala Ala Pro Lys Ala Thr Thr Asp Glu Gln Lys Met Ile Glu Lys
 50 55 60
 Ile Asn Val Gly Phe Lys Ala Ala Val Ala Ala Gly Gly Val Pro
 65 70 75 80
 Ala Ala Asn Lys Tyr Lys Thr Phe Val Ala Thr Phe Gly Ala Ala Ser
 85 90 95
 Asn Lys Ala Phe Ala Glu Ala Leu Ser Thr Glu Pro Lys Gly Ala Ala
 100 105 110
 Val Asp Ser Ser Lys Ala Ala Leu Thr Ser Lys Leu Asp Ala Ala Tyr
 115 120 125
 Lys Leu Ala Tyr Lys Ser Ala Glu Gly Ala Thr Pro Glu Ala Lys Tyr
 130 135 140
 Asp Asp Tyr Val Ala Thr Leu Ser Glu Ala Leu Arg Ile Ile Ala Gly

145					150					155				160
Thr	Leu	Glu	Val	His	Gly	Val	Lys	Pro	Ala	Ala	Glu	Glu	Val	Lys
				165					170					175
Thr	Pro	Ala	Gly	Glu	Leu	Gln	Val	Ile	Asp	Lys	Val	Asp	Ala	Ala
			180					185					190	
Lys	Val	Ala	Ala	Thr	Ala	Ala	Asn	Ala	Ala	Pro	Ala	Asn	Asp	Lys
		195					200					205		Phe
Thr	Val	Phe	Glu	Ala	Ala	Phe	Asn	Asp	Ala	Ile	Lys	Ala	Ser	Thr
	210					215					220			Gly
Gly	Ala	Tyr	Gln	Ser	Tyr	Lys	Phe	Ile	Pro	Ala	Leu	Glu	Ala	Ala
225					230				235					240
Lys	Gln	Ser	Tyr	Ala	Ala	Thr	Val	Ala	Thr	Ala	Pro	Ala	Val	Lys
				245				250					255	Tyr
Thr	Val	Phe	Glu	Thr	Ala	Leu	Lys	Lys	Ala	Ile	Thr	Ala	Met	Ser
			260					265					270	Gln
Ala	Gln	Lys	Ala	Ala	Lys	Pro	Ala	Ala	Ala	Ala	Thr	Gly	Thr	Ala
		275					280					285		Thr
Ala	Ala	Val	Gly	Ala	Ala	Thr	Gly	Ala	Ala	Thr	Ala	Ala	Ala	Gly
	290					295					300			Gly
Tyr	Lys	Val												
305														

<210> 149
 <211> 209
 <212> PRT
 <213> Polistes annularis (Paper wasp)

<400> 149														
Ser	Ser	Gln	Gly	Val	Asp	Tyr	Cys	Lys	Ile	Lys	Cys	Pro	Ser	Gly
1				5					10					15
His	Thr	Val	Cys	Gln	Tyr	Gly	Glu	Ser	Thr	Lys	Pro	Ser	Lys	Asn
			20					25					30	Cys
Ala	Gly	Lys	Val	Ile	Lys	Ser	Val	Gly	Pro	Thr	Glu	Glu	Glu	Lys
		35					40					45		Lys
Leu	Ile	Val	Ser	Glu	His	Asn	Arg	Phe	Arg	Gln	Lys	Val	Ala	Gln
		50				55					60			Gly
Leu	Glu	Thr	Arg	Gly	Asn	Pro	Gly	Pro	Gln	Pro	Ala	Ala	Ser	Asp
65					70				75					80
Asn	Asp	Leu	Val	Trp	Asn	Asp	Glu	Leu	Ala	His	Ile	Ala	Gln	Val
			85					90					95	Trp
Ala	Ser	Gln	Cys	Gln	Phe	Leu	Val	His	Asp	Lys	Cys	Arg	Asn	Thr
		100						105					110	Ala
Lys	Tyr	Pro	Val	Gly	Gln	Asn	Ile	Ala	Tyr	Ala	Gly	Gly	Ser	Asn
		115				120						125		Leu
Pro	Asp	Val	Val	Ser	Leu	Ile	Lys	Leu	Trp	Glu	Asn	Glu	Val	Lys
	130					135					140			Asp
Phe	Asn	Tyr	Asn	Thr	Gly	Ile	Thr	Lys	Gln	Asn	Phe	Ala	Lys	Ile
145					150				155					160
His	Tyr	Thr	Gln	Met	Val	Trp	Gly	Lys	Thr	Lys	Glu	Ile	Gly	Cys
			165						170				175	Gly
Ser	Leu	Lys	Tyr	Met	Glu	Asn	Asn	Met	Gln	Asn	His	Tyr	Leu	Ile
			180					185					190	Cys
Asn	Tyr	Gly	Pro	Ala	Gly	Asn	Tyr	Leu	Gly	Gln	Leu	Pro	Tyr	Thr
		195					200					205		Lys
Lys														

<210> 150
 <211> 206

<212> PRT

<213> Polistes dominulus (European paper wasp)

<400> 150

Asn	Asp	Tyr	Cys	Lys	Ile	Lys	Cys	Ser	Ser	Gly	Val	His	Thr	Val	Cys
1				5					10					15	
Gln	Tyr	Gly	Glu	Ser	Thr	Lys	Pro	Ser	Lys	Asn	Cys	Ala	Gly	Lys	Leu
			20					25					30		
Ile	Lys	Ser	Val	Gly	Pro	Thr	Glu	Glu	Glu	Lys	Lys	Leu	Ile	Val	Glu
		35					40					45			
Glu	His	Asn	Arg	Phe	Arg	Gln	Lys	Val	Ala	Lys	Gly	Leu	Glu	Thr	Arg
	50					55					60				
Gly	Asn	Pro	Gly	Pro	Gln	Pro	Ala	Ala	Ser	Asn	Met	Asn	Asn	Leu	Val
65					70					75				80	
Trp	Asn	Asp	Glu	Leu	Ala	Lys	Ile	Ala	Gln	Val	Trp	Ala	Ser	Gln	Cys
				85					90					95	
Gln	Ile	Leu	Val	His	Asp	Lys	Cys	Arg	Asn	Thr	Glu	Lys	Tyr	Gln	Val
		100						105					110		
Gly	Gln	Asn	Ile	Ala	Tyr	Ala	Gly	Ser	Ser	Asn	His	Phe	Pro	Ser	Val
		115					120					125			
Thr	Lys	Leu	Ile	Gln	Leu	Trp	Glu	Asn	Glu	Val	Lys	Asp	Phe	Asn	Tyr
	130					135					140				
Asn	Thr	Gly	Ile	Thr	Asn	Lys	Asn	Phe	Gly	Lys	Val	Gly	His	Tyr	Thr
145					150					155				160	
Gln	Met	Val	Trp	Gly	Asn	Thr	Lys	Glu	Val	Gly	Cys	Gly	Ser	Leu	Lys
				165				170						175	
Tyr	Val	Glu	Lys	Asn	Met	Gln	Ile	His	Tyr	Leu	Ile	Cys	Asn	Tyr	Gly
			180					185					190		
Pro	Ala	Gly	Asn	Tyr	Leu	Gly	Gln	Pro	Ile	Tyr	Thr	Lys	Lys		
		195					200						205		

<210> 151

<211> 205

<212> PRT

<213> Polistes exclamans (Paper wasp)

<400> 151

Val	Asp	Tyr	Cys	Lys	Ile	Lys	Cys	Pro	Ser	Gly	Ile	His	Thr	Val	Cys
1				5					10					15	
Gln	Tyr	Gly	Glu	Ser	Thr	Lys	Pro	Ser	Lys	Asn	Cys	Ala	Gly	Lys	Val
			20					25					30		
Ile	Lys	Ser	Val	Gly	Pro	Thr	Glu	Glu	Glu	Lys	Lys	Leu	Ile	Val	Ser
		35					40					45			
Glu	His	Asn	Arg	Phe	Arg	Gln	Lys	Val	Ala	Gln	Gly	Leu	Glu	Thr	Arg
	50					55					60				
Gly	Asn	Pro	Gly	Pro	Gln	Pro	Ala	Ala	Ser	Asp	Met	Asn	Asp	Leu	Val
65					70					75				80	
Trp	Asn	Asp	Glu	Leu	Ala	His	Ile	Ala	Gln	Val	Trp	Ala	Ser	Gln	Cys
				85					90					95	
Gln	Phe	Leu	Val	His	Asp	Lys	Cys	Arg	Asn	Thr	Ala	Lys	Tyr	Pro	Val
		100						105					110		
Gly	Gln	Asn	Ile	Ala	Tyr	Ala	Gly	Gly	Ser	Lys	Leu	Pro	Asp	Val	Val
		115					120					125			
Ser	Leu	Ile	Lys	Leu	Trp	Glu	Asn	Glu	Val	Lys	Asp	Phe	Asn	Tyr	Asn
	130					135					140				
Thr	Gly	Ile	Thr	Lys	Gln	Asn	Phe	Ala	Lys	Ile	Gly	His	Tyr	Thr	Gln
145					150					155				160	
Met	Val	Trp	Gly	Lys	Thr	Lys	Glu	Ile	Gly	Cys	Gly	Ser	Leu	Lys	Tyr
				165				170						175	
Ile	Glu	Asn	Lys	Met	Gln	Asn	His	Tyr	Leu	Ile	Cys	Asn	Tyr	Gly	Pro

			180					185					190
Ala	Gly	Asn	Tyr	Leu	Gly	Gln	Leu	Pro	Tyr	Thr	Lys	Lys	
		195					200					205	

<210> 152
 <211> 205
 <212> PRT
 <213> Polistes fuscatus (Paper wasp)

<400> 152

Val	Asp	Tyr	Cys	Lys	Ile	Lys	Cys	Ser	Ser	Gly	Ile	His	Thr	Val	Cys
1				5					10					15	
Gln	Tyr	Gly	Glu	Ser	Thr	Lys	Pro	Ser	Lys	Asn	Cys	Ala	Asp	Lys	Val
		20						25					30		
Ile	Lys	Ser	Val	Gly	Pro	Thr	Glu	Glu	Lys	Lys	Leu	Ile	Val	Asn	
		35					40				45				
Glu	His	Asn	Arg	Phe	Arg	Gln	Lys	Val	Ala	Gln	Gly	Leu	Glu	Thr	Arg
	50					55				60					
Gly	Asn	Pro	Gly	Pro	Gln	Pro	Ala	Ala	Ser	Asp	Met	Asn	Asn	Leu	Val
65					70				75					80	
Trp	Asn	Asp	Glu	Leu	Ala	His	Ile	Ala	Gln	Val	Trp	Ala	Ser	Gln	Cys
			85						90					95	
Gln	Ile	Leu	Val	His	Asp	Lys	Cys	Arg	Asn	Thr	Ala	Lys	Tyr	Gln	Val
		100						105					110		
Gly	Gln	Asn	Ile	Ala	Tyr	Ala	Gly	Gly	Ser	Lys	Leu	Pro	Asp	Val	Val
	115						120					125			
Ser	Leu	Ile	Lys	Leu	Trp	Glu	Asn	Glu	Val	Lys	Asp	Phe	Asn	Tyr	Asn
	130					135					140				
Lys	Gly	Ile	Thr	Lys	Gln	Asn	Phe	Gly	Lys	Val	Gly	His	Tyr	Thr	Gln
145					150				155						160
Met	Ile	Trp	Ala	Lys	Thr	Lys	Glu	Ile	Gly	Cys	Gly	Ser	Leu	Lys	Tyr
				165					170					175	
Met	Lys	Asn	Asn	Met	Gln	His	His	Tyr	Leu	Ile	Cys	Asn	Tyr	Gly	Pro
		180						185					190		
Ala	Gly	Asn	Tyr	Leu	Gly	Gln	Leu	Pro	Tyr	Thr	Lys	Lys			
		195					200					205			

<210> 153
 <211> 160
 <212> PRT
 <213> Prunus avium (Cherry)

<400> 153

Met	Gly	Val	Phe	Thr	Tyr	Glu	Ser	Glu	Phe	Thr	Ser	Glu	Ile	Pro	Pro
1				5					10					15	
Pro	Arg	Leu	Phe	Lys	Ala	Phe	Val	Leu	Asp	Ala	Asp	Asn	Leu	Val	Pro
		20						25					30		
Lys	Ile	Ala	Pro	Gln	Ala	Ile	Lys	His	Ser	Glu	Ile	Leu	Glu	Gly	Asp
		35					40					45			
Gly	Gly	Pro	Gly	Thr	Ile	Lys	Lys	Ile	Thr	Phe	Gly	Glu	Gly	Ser	Gln
	50					55				60					
Tyr	Gly	Tyr	Val	Lys	His	Lys	Ile	Asp	Ser	Ile	Asp	Lys	Glu	Asn	Tyr
65					70				75					80	
Ser	Tyr	Ser	Tyr	Thr	Leu	Ile	Glu	Gly	Asp	Ala	Leu	Gly	Asp	Thr	Leu
				85					90					95	
Glu	Lys	Ile	Ser	Tyr	Glu	Thr	Lys	Leu	Val	Ala	Ser	Pro	Ser	Gly	Gly
			100					105					110		
Ser	Ile	Ile	Lys	Ser	Thr	Ser	His	Tyr	His	Thr	Lys	Gly	Asn	Val	Glu
		115					120					125			

Ile	Lys	Glu	Glu	His	Val	Lys	Ala	Gly	Lys	Glu	Lys	Ala	Ser	Asn	Leu
	130						135					140			
Phe	Lys	Leu	Ile	Glu	Thr	Tyr	Leu	Lys	Gly	His	Pro	Asp	Ala	Tyr	Asn
145					150					155					160

<210> 154
 <211> 181
 <212> PRT
 <213> Rattus norvegicus (Rat)

<400> 154

Met	Lys	Leu	Leu	Leu	Leu	Leu	Leu	Cys	Leu	Gly	Leu	Thr	Leu	Val	Cys
1				5					10					15	
Gly	His	Ala	Glu	Glu	Ala	Ser	Ser	Thr	Arg	Gly	Asn	Leu	Asp	Val	Ala
			20					25					30		
Lys	Leu	Asn	Gly	Asp	Trp	Phe	Ser	Ile	Val	Val	Ala	Ser	Asn	Lys	Arg
		35					40					45			
Glu	Lys	Ile	Glu	Glu	Asn	Gly	Ser	Met	Arg	Val	Phe	Met	Gln	His	Ile
	50					55					60				
Asp	Val	Leu	Glu	Asn	Ser	Leu	Gly	Phe	Lys	Phe	Arg	Ile	Lys	Glu	Asn
65					70					75				80	
Gly	Glu	Cys	Arg	Glu	Leu	Tyr	Leu	Val	Ala	Tyr	Lys	Thr	Pro	Glu	Asp
				85					90					95	
Gly	Glu	Tyr	Phe	Val	Glu	Tyr	Asp	Gly	Gly	Asn	Thr	Phe	Thr	Ile	Leu
			100					105					110		
Lys	Thr	Asp	Tyr	Asp	Arg	Tyr	Val	Met	Phe	His	Leu	Ile	Asn	Phe	Lys
		115					120					125			
Asn	Gly	Glu	Thr	Phe	Gln	Leu	Met	Val	Leu	Tyr	Gly	Arg	Thr	Lys	Asp
	130					135					140				
Leu	Ser	Ser	Asp	Ile	Lys	Glu	Lys	Phe	Ala	Lys	Leu	Cys	Glu	Ala	His
145					150					155					160
Gly	Ile	Thr	Arg	Asp	Asn	Ile	Ile	Asp	Leu	Thr	Lys	Thr	Asp	Arg	Cys
				165					170					175	
Leu	Gln	Ala	Arg	Gly											
				180											

<210> 155
 <211> 138
 <212> PRT
 <213> Solenopsis invicta (Red imported fire ant)

<400> 155

Met	Lys	Ser	Phe	Val	Leu	Ala	Thr	Cys	Leu	Leu	Gly	Phe	Ala	Gln	Ile
1				5					10					15	
Ile	Tyr	Ala	Asp	Asn	Lys	Glu	Leu	Lys	Ile	Ile	Arg	Lys	Asp	Val	Ala
			20					25					30		
Glu	Cys	Leu	Arg	Thr	Leu	Pro	Lys	Cys	Gly	Asn	Gln	Pro	Asp	Asp	Pro
		35					40					45			
Leu	Ala	Arg	Val	Asp	Val	Trp	His	Cys	Ala	Met	Ala	Lys	Arg	Gly	Val
	50					55					60				
Tyr	Asp	Asn	Pro	Asp	Pro	Ala	Val	Ile	Lys	Glu	Arg	Ser	Met	Lys	Met
65					70					75				80	
Cys	Thr	Lys	Ile	Ile	Thr	Asp	Pro	Ala	Asn	Val	Glu	Asn	Cys	Lys	Lys
				85					90					95	
Val	Ala	Ser	Arg	Cys	Val	Asp	Arg	Glu	Thr	Gln	Gly	Pro	Lys	Ser	Asn
			100					105					110		
Arg	Gln	Lys	Ala	Val	Asn	Ile	Ile	Gly	Cys	Ala	Leu	Arg	Ala	Gly	Val
		115				120						125			
Ala	Glu	Thr	Thr	Val	Leu	Ala	Arg	Lys	Lys						

130

135

<210> 156

<211> 212

<212> PRT

<213> *Solenopsis invicta* (Red imported fire ant)

<400> 156

```

Thr Asn Tyr Cys Asn Leu Gln Ser Cys Lys Arg Asn Asn Ala Ile His
 1          5          10          15
Thr Met Cys Gln Tyr Thr Ser Pro Thr Pro Gly Pro Met Cys Leu Glu
          20          25          30
Tyr Ser Asn Val Gly Phe Thr Asp Ala Glu Lys Asp Ala Ile Val Asn
          35          40          45
Lys His Asn Glu Leu Arg Gln Arg Val Ala Ser Gly Lys Glu Met Arg
          50          55          60
Gly Thr Asn Gly Pro Gln Pro Pro Ala Val Lys Met Pro Asn Leu Thr
65          70          75          80
Trp Asp Pro Glu Leu Ala Thr Ile Ala Gln Arg Trp Ala Asn Gln Cys
          85          90          95
Thr Phe Glu His Asp Ala Cys Arg Asn Val Glu Arg Phe Ala Val Gly
          100          105          110
Gln Asn Ile Ala Ala Thr Ser Ser Gly Lys Asn Lys Ser Thr Pro
          115          120          125
Asn Glu Met Ile Leu Leu Trp Tyr Asn Glu Val Lys Asp Phe Asp Asn
130          135          140
Arg Trp Ile Ser Ser Phe Pro Ser Asp Asp Asn Ile Leu Met Lys Val
145          150          155          160
Glu His Tyr Thr Gln Ile Val Trp Ala Lys Thr Ser Lys Ile Gly Cys
          165          170          175
Ala Arg Ile Met Phe Lys Glu Pro Asp Asn Trp Thr Lys His Tyr Leu
          180          185          190
Val Cys Asn Tyr Gly Pro Ala Gly Asn Val Leu Gly Ala Pro Ile Tyr
          195          200          205
Glu Ile Lys Lys
210

```

<210> 157

<211> 117

<212> PRT

<213> *Solenopsis invicta* (Red imported fire ant)

<400> 157

```

Leu Asp Ile Lys Glu Ile Ser Ile Met Asn Arg Ile Leu Glu Lys Cys
 1          5          10          15
Ile Arg Thr Val Pro Lys Arg Glu Asn Asp Pro Ile Asn Pro Leu Lys
          20          25          30
Asn Val Asn Val Leu Tyr Cys Ala Phe Thr Lys Arg Gly Ile Phe Thr
          35          40          45
Pro Lys Gly Val Asn Thr Lys Gln Tyr Ile Asn Tyr Cys Glu Lys Thr
          50          55          60
Ile Ile Ser Pro Ala Asp Ile Lys Leu Cys Lys Lys Ile Ala Ser Lys
65          70          75          80
Cys Val Lys Lys Val Tyr Asp Arg Pro Gly Pro Val Ile Glu Arg Ser
          85          90          95
Lys Asn Leu Leu Ser Cys Val Leu Lys Lys Gly Leu Leu Glu Leu Thr
          100          105          110
Val Tyr Gly Lys Asn
115

```

<210> 158
 <211> 119
 <212> PRT
 <213> Solenopsis richteri (Black imported fire ant)

<400> 158
 Asp Ile Glu Ala Gln Arg Val Leu Arg Lys Asp Ile Ala Glu Cys Ala
 1 5 10 15
 Arg Thr Leu Pro Lys Cys Val Asn Gln Pro Asp Asp Pro Leu Ala Arg
 20 25 30
 Val Asp Val Trp His Cys Ala Met Ser Lys Arg Gly Val Tyr Asp Asn
 35 40 45
 Pro Asp Pro Ala Val Val Lys Glu Lys Asn Ser Lys Met Cys Pro Lys
 50 55 60
 Ile Ile Thr Asp Pro Ala Asp Val Glu Asn Cys Lys Lys Val Val Ser
 65 70 75 80
 Arg Cys Val Asp Arg Glu Thr Gln Arg Pro Arg Ser Asn Arg Gln Lys
 85 90 95
 Ala Ile Asn Ile Thr Gly Cys Ile Leu Arg Ala Gly Val Val Glu Ala
 100 105 110
 Thr Val Leu Ala Arg Glu Lys
 115

<210> 159
 <211> 211
 <212> PRT
 <213> Solenopsis richteri (Black imported fire ant)

<400> 159
 Thr Asn Tyr Cys Asn Leu Gln Ser Cys Lys Arg Asn Asn Ala Ile His
 1 5 10 15
 Thr Met Cys Gln Tyr Thr Ser Pro Thr Pro Gly Pro Met Cys Leu Glu
 20 25 30
 Tyr Ser Asn Val Gly Phe Thr Asp Ala Glu Lys Asp Ala Ile Val Asn
 35 40 45
 Lys His Asn Glu Leu Arg Gln Arg Val Ala Ser Gly Lys Glu Met Arg
 50 55 60
 Gly Thr Asn Gly Pro Gln Pro Pro Ala Val Lys Met Pro Asn Leu Thr
 65 70 75 80
 Trp Asp Pro Glu Leu Ala Thr Ile Ala Gln Arg Trp Ala Asn Gln Cys
 85 90 95
 Thr Phe Glu His Asp Ala Cys Arg Asn Val Glu Arg Phe Ala Val Gly
 100 105 110
 Gln Asn Ile Ala Ala Thr Ser Ser Ser Gly Lys Asn Lys Ser Thr Leu
 115 120 125
 Ser Asp Met Ile Leu Leu Trp Tyr Asn Glu Val Lys Asp Phe Asp Asn
 130 135 140
 Arg Trp Ile Ser Ser Phe Pro Ser Asp Gly Asn Ile Leu Met His Val
 145 150 155 160
 Gly His Tyr Thr Gln Ile Val Trp Ala Lys Thr Lys Lys Ile Gly Cys
 165 170 175
 Gly Arg Ile Met Phe Lys Glu Asp Asn Trp Asn Lys His Tyr Leu Val
 180 185 190
 Cys Asn Tyr Gly Pro Ala Gly Asn Val Leu Gly Ala Gln Ile Tyr Glu
 195 200 205
 Ile Lys Lys
 210

<210> 160
 <211> 202
 <212> PRT
 <213> Vespa crabro (European hornet)

<400> 160
 Asn Asn Tyr Cys Lys Ile Lys Cys Arg Ser Gly Ile His Thr Leu Cys
 1 5 10 15
 Lys Tyr Gly Thr Ser Thr Lys Pro Asn Cys Gly Lys Asn Val Val Lys
 20 25 30
 Ala Ser Gly Leu Thr Lys Gln Glu Asn Leu Glu Ile Leu Lys Gln His
 35 40 45
 Asn Glu Phe Arg Gln Lys Val Ala Arg Gly Leu Glu Thr Arg Gly Asn
 50 55 60
 Pro Gly Pro Gln Pro Pro Ala Lys Ser Met Asn Thr Leu Val Trp Asn
 65 70 75 80
 Asp Glu Leu Ala Gln Ile Ala Gln Val Trp Ala Asn Gln Cys Asn Tyr
 85 90 95
 Gly His Asp Asn Cys Arg Asn Ser Ala Lys Tyr Ser Val Gly Gln Asn
 100 105 110
 Ile Ala Glu Gly Ser Thr Thr Ala Asp Asn Phe Gly Ser Val Ser Asn
 115 120 125
 Met Val Lys Met Trp Glu Asp Glu Val Lys Asp Tyr Gln Tyr Gly Ser
 130 135 140
 Pro Lys Asn Lys Leu Asn Lys Val Gly His Tyr Thr Gln Met Val Trp
 145 150 155 160
 Ala Lys Thr Lys Glu Ile Gly Cys Gly Ser Ile Lys Tyr Ile Glu Asn
 165 170 175
 Gly Trp His Arg His Tyr Leu Val Cys Asn Tyr Gly Pro Ala Gly Asn
 180 185 190
 Val Gly Asn Glu Pro Ile Tyr Glu Arg Lys
 195 200

<210> 161
 <211> 202
 <212> PRT
 <213> Vespa crabro (European hornet)

<400> 161
 Asn Asn Tyr Cys Lys Ile Lys Cys Arg Ser Gly Ile His Thr Leu Cys
 1 5 10 15
 Lys Tyr Gly Thr Ser Thr Lys Pro Asn Cys Gly Lys Asn Val Val Lys
 20 25 30
 Ala Ser Gly Leu Thr Lys Gln Glu Asn Leu Glu Ile Leu Lys Gln His
 35 40 45
 Asn Glu Phe Arg Gln Lys Val Ala Arg Gly Leu Glu Thr Arg Gly Asn
 50 55 60
 Pro Gly Pro Gln Pro Pro Ala Lys Ser Met Asn Thr Leu Val Trp Asn
 65 70 75 80
 Asp Glu Leu Ala Gln Ile Ala Gln Val Trp Ala Asn Gln Cys Asn Tyr
 85 90 95
 Gly His Asp Asn Cys Arg Asn Ser Ala Lys Tyr Ser Val Gly Gln Asn
 100 105 110
 Ile Ala Glu Gly Ser Thr Ser Ala Asp Asn Phe Val Asn Val Ser Asn
 115 120 125
 Met Val Lys Met Trp Glu Asp Glu Val Lys Asp Tyr Gln Tyr Gly Ser
 130 135 140
 Pro Lys Asn Lys Leu Asn Lys Val Gly His Tyr Thr Gln Met Val Trp
 145 150 155 160

Ala Lys Thr Lys Glu Ile Gly Cys Gly Ser Glu Asp Tyr Ile Glu Asp
165 170 175
Gly Trp His Arg His Tyr Leu Val Cys Asn Tyr Gly Pro Ala Gly Asn
180 185 190
Val Gly Asn Glu Pro Ile Tyr Glu Arg Lys
195 200

<210> 162

<211> 204

<212> PRT

<213> *Vespula flavopilosa* (Yellow jacket) (Wasp)

<400> 162

Asn Asn Tyr Cys Lys Ile Lys Cys Leu Lys Gly Gly Val His Thr Ala
1 5 10 15
Cys Lys Tyr Gly Ser Leu Lys Pro Asn Cys Gly Asn Lys Val Val Val
20 25 30
Ser Tyr Gly Leu Thr Lys Gln Glu Lys Gln Asp Ile Leu Lys Glu His
35 40 45
Asn Asp Phe Arg Gln Lys Ile Ala Arg Gly Leu Glu Thr Arg Gly Asn
50 55 60
Pro Gly Pro Gln Pro Pro Ala Lys Asn Met Lys Asn Leu Val Trp Asn
65 70 75 80
Asp Glu Leu Ala Tyr Val Ala Gln Val Trp Ala Asn Gln Cys Gln Tyr
85 90 95
Gly His Asp Thr Cys Arg Asp Ile Ala Lys Tyr Gln Val Gly Gln Asn
100 105 110
Val Ala Leu Thr Gly Ser Thr Ala Ala Lys Tyr Asp Asp Pro Val Lys
115 120 125
Leu Val Lys Met Trp Glu Asp Glu Val Lys Asp Tyr Asn Pro Lys Lys
130 135 140
Lys Phe Ser Gly Asn Asn Phe Leu Lys Thr Gly His Tyr Thr Gln Met
145 150 155 160
Val Trp Ala Asn Thr Lys Glu Val Gly Cys Gly Ser Ile Lys Phe Ile
165 170 175
Gln Glu Lys Trp His Lys His Tyr Leu Val Cys Asn Tyr Gly Pro Ser
180 185 190
Gly Asn Phe Gln Asn Glu Glu Leu Tyr Gln Thr Lys
195 200

<210> 163

<211> 204

<212> PRT

<213> *Vespula germanica* (Yellow jacket) (Wasp)

<400> 163

Asn Asn Tyr Cys Lys Ile Lys Cys Leu Lys Gly Gly Val His Thr Ala
1 5 10 15
Cys Lys Tyr Glu Ser Leu Lys Pro Asn Cys Ala Asn Lys Lys Val Val
20 25 30
Ala Tyr Gly Leu Thr Lys Gln Glu Lys Gln Asp Ile Leu Lys Glu His
35 40 45
Asn Asp Phe Arg Gln Lys Ile Ala Arg Gly Leu Glu Thr Arg Gly Asn
50 55 60
Pro Gly Pro Gln Pro Pro Ala Lys Asn Met Lys Asn Leu Val Trp Ser
65 70 75 80
Asp Glu Leu Ala Tyr Ile Ala Gln Val Trp Ala Asn Gln Cys Gln Tyr
85 90 95
Gly His Asp Thr Cys Arg Asp Val Ala Lys Tyr Pro Val Gly Gln Asn

			100					105				110					
Val	Ala	Leu	Thr	Gly	Ser	Thr	Ala	Ala	Lys	Tyr	Asp	Asn	Pro	Val	Lys		
		115					120					125					
Leu	Val	Lys	Met	Trp	Glu	Asp	Glu	Val	Lys	Asp	Tyr	Asn	Pro	Lys	Lys		
		130				135					140						
Lys	Phe	Ser	Glu	Asn	Asn	Phe	Leu	Lys	Ile	Gly	His	Tyr	Thr	Gln	Met		
145				150						155					160		
Val	Trp	Ala	Asn	Thr	Lys	Glu	Val	Gly	Cys	Gly	Ser	Ile	Lys	Tyr	Ile		
			165					170						175			
Gln	Asp	Lys	Trp	His	Lys	His	Tyr	Leu	Val	Cys	Asn	Tyr	Gly	Pro	Ser		
		180					185						190				
Gly	Asn	Phe	Gly	Asn	Glu	Glu	Leu	Tyr	Gln	Thr	Lys						
		195					200										

<210> 164

<211> 300

<212> PRT

<213> Vespula maculifrons (Eastern yellow jacket) (Wasp)

<400> 164

Gly	Pro	Lys	Cys	Pro	Phe	Asn	Ser	Asp	Thr	Val	Ser	Ile	Ile	Ile	Glu		
1			5					10					15				
Thr	Arg	Glu	Asn	Arg	Asn	Arg	Asp	Leu	Tyr	Thr	Leu	Gln	Thr	Leu	Gln		
		20					25					30					
Asn	His	Pro	Glu	Phe	Lys	Lys	Lys	Thr	Ile	Thr	Arg	Pro	Val	Val	Phe		
		35				40					45						
Ile	Thr	His	Gly	Phe	Thr	Ser	Ser	Ala	Ser	Glu	Lys	Asn	Phe	Ile	Asn		
	50				55					60							
Leu	Ala	Lys	Ala	Leu	Val	Asp	Lys	Asp	Asn	Tyr	Met	Val	Ile	Ser	Ile		
65			70					75						80			
Asp	Trp	Gln	Thr	Ala	Ala	Cys	Thr	Asn	Glu	Tyr	Pro	Gly	Leu	Lys	Tyr		
			85					90					95				
Ala	Tyr	Tyr	Pro	Thr	Ala	Ala	Ser	Asn	Thr	Arg	Leu	Val	Gly	Gln	Tyr		
			100					105					110				
Ile	Ala	Thr	Ile	Thr	Gln	Lys	Leu	Val	Lys	Asp	Tyr	Lys	Ile	Ser	Met		
	115					120						125					
Ala	Asn	Ile	Arg	Leu	Ile	Gly	His	Ser	Leu	Gly	Ala	His	Val	Ser	Gly		
	130					135					140						
Phe	Ala	Gly	Lys	Arg	Val	Gln	Glu	Leu	Lys	Leu	Gly	Lys	Tyr	Ser	Glu		
145				150						155					160		
Ile	Ile	Gly	Leu	Asp	Pro	Ala	Arg	Pro	Ser	Phe	Asp	Ser	Asn	His	Cys		
			165					170						175			
Ser	Glu	Arg	Leu	Cys	Glu	Thr	Asp	Ala	Glu	Tyr	Val	Gln	Ile	Ile	His		
		180					185						190				
Thr	Ser	Asn	Tyr	Leu	Gly	Thr	Glu	Lys	Ile	Leu	Gly	Thr	Val	Asp	Phe		
	195					200						205					
Tyr	Met	Asn	Asn	Gly	Lys	Asn	Asn	Pro	Gly	Cys	Gly	Arg	Phe	Phe	Ser		
	210					215					220						
Glu	Val	Cys	Ser	His	Thr	Arg	Ala	Val	Ile	Tyr	Met	Ala	Glu	Cys	Ile		
225				230						235					240		
Lys	His	Glu	Cys	Cys	Leu	Ile	Gly	Ile	Pro	Arg	Ser	Lys	Ser	Ser	Gln		
			245						250					255			
Pro	Ile	Ser	Arg	Cys	Thr	Lys	Gln	Glu	Cys	Val	Cys	Val	Gly	Leu	Asn		
		260					265						270				
Ala	Lys	Lys	Tyr	Pro	Ser	Arg	Gly	Ser	Phe	Tyr	Val	Pro	Val	Glu	Ser		
	275						280					285					
Thr	Ala	Pro	Phe	Cys	Asn	Asn	Lys	Gly	Lys	Ile	Ile						
	290					295					300						

<210> 165

<211> 204

<212> PRT

<213> *Vespula maculifrons* (Eastern yellow jacket) (Wasp)

<400> 165

Asn	Asn	Tyr	Cys	Lys	Ile	Lys	Cys	Leu	Lys	Gly	Gly	Val	His	Thr	Ala
1				5					10					15	
Cys	Lys	Tyr	Gly	Ser	Leu	Lys	Pro	Asn	Cys	Gly	Asn	Lys	Lys	Val	Val
			20					25					30		
Ser	Tyr	Gly	Leu	Thr	Lys	Gln	Glu	Lys	Gln	Asp	Ile	Leu	Lys	Glu	His
			35				40					45			
Asn	Asp	Phe	Arg	Gln	Lys	Ile	Ala	Arg	Gly	Leu	Glu	Thr	Arg	Gly	Asn
	50					55					60				
Pro	Gly	Pro	Gln	Pro	Pro	Ala	Lys	Asn	Met	Lys	Asn	Leu	Val	Trp	Ser
65					70					75				80	
Asp	Glu	Leu	Ala	Tyr	Ile	Ala	Gln	Val	Trp	Ala	Asn	Gln	Cys	Gln	Tyr
				85					90					95	
Gly	His	Asp	Thr	Cys	Arg	Asp	Val	Ala	Lys	Tyr	Gln	Val	Gly	Gln	Asn
			100					105					110		
Val	Ala	Leu	Thr	Gly	Ser	Thr	Ala	Ala	Val	Tyr	Asn	Asp	Pro	Val	Lys
		115					120					125			
Leu	Val	Lys	Met	Trp	Glu	Asp	Glu	Val	Lys	Asp	Tyr	Asn	Pro	Lys	Lys
	130					135					140				
Lys	Phe	Ser	Glu	Asn	Asn	Phe	Leu	Lys	Ile	Gly	His	Tyr	Thr	Gln	Met
145					150					155					160
Val	Trp	Ala	Asn	Thr	Lys	Glu	Val	Gly	Cys	Gly	Ser	Ile	Lys	Tyr	Ile
				165					170					175	
Gln	Glu	Asn	Trp	His	Lys	His	Tyr	Leu	Val	Cys	Asn	Tyr	Gly	Pro	Ser
			180					185					190		
Gly	Asn	Phe	Gln	Asn	Glu	Glu	Leu	Tyr	Gln	Thr	Lys				
		195					200								

<210> 166

<211> 204

<212> PRT

<213> *Vespula pensylvanica* (Western yellow jacket) (Wasp)

<400> 166

Asn	Asn	Tyr	Cys	Lys	Ile	Lys	Cys	Leu	Lys	Gly	Gly	Val	His	Thr	Ala
1				5					10					15	
Cys	Lys	Tyr	Gly	Ser	Leu	Lys	Pro	Asn	Cys	Gly	Asn	Lys	Ile	Val	Val
			20					25					30		
Ser	Tyr	Gly	Leu	Thr	Lys	Glu	Glu	Lys	Gln	Asp	Ile	Leu	Lys	Glu	His
			35				40					45			
Asn	Asp	Phe	Arg	Gln	Lys	Ile	Ala	Arg	Gly	Leu	Glu	Thr	Arg	Gly	Asn
	50					55					60				
Pro	Gly	Pro	Gln	Pro	Pro	Ala	Lys	Asn	Met	Lys	Asn	Leu	Val	Trp	Asn
65					70					75				80	
Asp	Glu	Leu	Ala	Tyr	Val	Ala	Gln	Val	Trp	Ala	Asn	Gln	Cys	Gln	Tyr
				85					90					95	
Gly	His	Asp	Thr	Cys	Arg	Asp	Val	Ala	Lys	Tyr	Pro	Val	Gly	Gln	Asn
			100					105					110		
Val	Ala	Leu	Thr	Gly	Ser	Thr	Ala	Asp	Lys	Tyr	Asp	Asn	Pro	Val	Lys
		115					120					125			
Leu	Val	Lys	Met	Trp	Glu	Asp	Glu	Val	Lys	Asp	Tyr	Asn	Pro	Lys	Lys
	130					135					140				
Lys	Phe	Ser	Glu	Asn	Asn	Phe	Asn	Lys	Ile	Gly	His	Tyr	Thr	Gln	Met
145					150					155					160
Val	Trp	Ala	Asn	Thr	Lys	Glu	Ile	Gly	Cys	Gly	Ser	Ile	Lys	Tyr	Ile

Gln	Asn	Glu	Trp	165	His	Lys	His	Tyr	Leu	170	Val	Cys	Asn	Tyr	Gly	175	Pro	Ser
			180						185						190			
Gly	Asn	Phe	Gly	Asn	Glu	Glu	Leu	Tyr	Gln	Thr	Lys							
		195					200											

<210> 167
 <211> 205
 <212> PRT
 <213> Vespula squamosa (Southern yellow jacket) (Wasp)

<400> 167

Val	Asp	Tyr	Cys	Lys	Ile	Lys	Cys	Leu	Lys	Gly	Gly	Val	His	Thr	Ala			
1				5					10					15				
Cys	Lys	Tyr	Gly	Thr	Ser	Thr	Lys	Pro	Asn	Cys	Gly	Asn	Met	Val	Val			
			20					25					30					
Lys	Ser	Tyr	Gly	Val	Thr	Gln	Ala	Glu	Lys	Gln	Glu	Ile	Leu	Lys	Ile			
			35				40					45						
His	Asn	Asp	Phe	Arg	Asn	Lys	Val	Ala	Arg	Gly	Leu	Glu	Thr	Arg	Gly			
	50				55						60							
Asn	Pro	Gly	Pro	Gln	Pro	Pro	Ala	Lys	Asn	Met	Asn	Asn	Leu	Val	Trp			
65				70					75					80				
Asn	Asn	Glu	Leu	Ala	Asn	Ile	Ala	Gln	Ile	Trp	Ala	Ser	Gln	Cys	Lys			
			85					90					95					
Tyr	Gly	His	Asp	Thr	Cys	Lys	Asp	Thr	Thr	Lys	Tyr	Asn	Val	Gly	Gln			
			100					105					110					
Asn	Ile	Ala	Val	Ser	Ser	Ser	Thr	Ala	Ala	Val	Tyr	Glu	Asn	Val	Gly			
			115				120					125						
Asn	Leu	Val	Lys	Ala	Trp	Glu	Asn	Glu	Val	Lys	Asp	Phe	Asn	Pro	Thr			
	130					135					140							
Ile	Ser	Trp	Glu	Gln	Asn	Glu	Phe	Lys	Lys	Ile	Gly	His	Tyr	Thr	Gln			
145				150					155						160			
Met	Val	Trp	Ala	Lys	Thr	Lys	Glu	Ile	Gly	Cys	Gly	Ser	Ile	Lys	Tyr			
				165				170						175				
Val	Asp	Asn	Asn	Trp	Tyr	Thr	His	Tyr	Leu	Val	Cys	Asn	Tyr	Gly	Pro			
		180						185					190					
Ala	Gly	Asn	Phe	Gly	Asn	Gln	Glu	Val	Tyr	Glu	Arg	Lys						
		195					200					205						

<210> 168
 <211> 336
 <212> PRT
 <213> Vespula vulgaris (Yellow jacket) (Wasp)

<400> 168

Met	Glu	Glu	Asn	Met	Asn	Leu	Lys	Tyr	Leu	Leu	Leu	Phe	Val	Tyr	Phe			
1				5					10					15				
Val	Gln	Val	Leu	Asn	Cys	Cys	Tyr	Gly	His	Gly	Asp	Pro	Leu	Ser	Tyr			
			20					25					30					
Glu	Leu	Asp	Arg	Gly	Pro	Lys	Cys	Pro	Phe	Asn	Ser	Asp	Thr	Val	Ser			
		35				40						45						
Ile	Ile	Ile	Glu	Thr	Arg	Glu	Asn	Arg	Asn	Arg	Asp	Leu	Tyr	Thr	Leu			
	50				55						60							
Gln	Thr	Leu	Gln	Asn	His	Pro	Glu	Phe	Lys	Lys	Lys	Thr	Ile	Thr	Arg			
65				70					75					80				
Pro	Val	Val	Phe	Ile	Thr	His	Gly	Phe	Thr	Ser	Ser	Ala	Ser	Glu	Thr			
				85				90					95					
Asn	Phe	Ile	Asn	Leu	Ala	Lys	Ala	Leu	Val	Asp	Lys	Asp	Asn	Tyr	Met			
			100					105					110					

Val	Ile	Ser	Ile	Asp	Trp	Gln	Thr	Ala	Ala	Cys	Thr	Asn	Glu	Ala	Ala	
		115					120					125				
Gly	Leu	Lys	Tyr	Leu	Tyr	Tyr	Pro	Thr	Ala	Ala	Arg	Asn	Thr	Arg	Leu	
	130					135					140					
Val	Gly	Gln	Tyr	Ile	Ala	Thr	Ile	Thr	Gln	Lys	Leu	Val	Lys	His	Tyr	
145					150					155					160	
Lys	Ile	Ser	Met	Ala	Asn	Ile	Arg	Leu	Ile	Gly	His	Ser	Leu	Gly	Ala	
				165					170					175		
His	Ala	Ser	Gly	Phe	Ala	Gly	Lys	Lys	Val	Gln	Glu	Leu	Lys	Leu	Gly	
			180					185					190			
Lys	Tyr	Ser	Glu	Ile	Ile	Gly	Leu	Asp	Pro	Ala	Arg	Pro	Ser	Phe	Asp	
		195					200					205				
Ser	Asn	His	Cys	Ser	Glu	Arg	Leu	Cys	Glu	Thr	Asp	Ala	Glu	Tyr	Val	
	210					215					220					
Gln	Ile	Ile	His	Thr	Ser	Asn	Tyr	Leu	Gly	Thr	Glu	Lys	Thr	Leu	Gly	
225					230					235					240	
Thr	Val	Asp	Phe	Tyr	Met	Asn	Asn	Gly	Lys	Asn	Gln	Pro	Gly	Cys	Gly	
				245					250					255		
Arg	Phe	Phe	Ser	Glu	Val	Cys	Ser	His	Ser	Arg	Ala	Val	Ile	Tyr	Met	
			260					265					270			
Ala	Glu	Cys	Ile	Lys	His	Glu	Cys	Cys	Leu	Ile	Gly	Ile	Pro	Lys	Ser	
		275					280					285				
Lys	Ser	Ser	Gln	Pro	Ile	Ser	Ser	Cys	Thr	Lys	Gln	Glu	Cys	Val	Cys	
	290					295					300					
Val	Gly	Leu	Asn	Ala	Lys	Lys	Tyr	Pro	Ser	Arg	Gly	Ser	Phe	Tyr	Val	
305					310					315					320	
Pro	Val	Glu	Ser	Thr	Ala	Pro	Phe	Cys	Asn	Asn	Lys	Gly	Lys	Ile	Ile	
				325					330					335		

<210> 169

<211> 331

<212> PRT

<213> *Vespula vulgaris* (Yellow jacket) (Wasp)

<400> 169

Ser	Glu	Arg	Pro	Lys	Arg	Val	Phe	Asn	Ile	Tyr	Trp	Asn	Val	Pro	Thr	
1				5					10					15		
Phe	Met	Cys	His	Gln	Tyr	Asp	Leu	Tyr	Phe	Asp	Glu	Val	Thr	Asn	Phe	
			20					25					30			
Asn	Ile	Lys	Arg	Asn	Ser	Lys	Asp	Phe	Gln	Gly	Asp	Lys	Ile	Ala		
		35				40					45					
Ile	Phe	Tyr	Asp	Pro	Gly	Glu	Phe	Pro	Ala	Leu	Leu	Ser	Leu	Lys	Asp	
	50					55					60					
Gly	Lys	Tyr	Lys	Lys	Arg	Asn	Gly	Gly	Val	Pro	Gln	Glu	Gly	Asn	Ile	
65					70					75				80		
Thr	Ile	His	Leu	Gln	Lys	Phe	Ile	Glu	Asn	Leu	Asp	Lys	Ile	Tyr	Pro	
				85					90				95			
Asn	Arg	Asn	Phe	Ser	Gly	Ile	Gly	Val	Ile	Asp	Phe	Glu	Arg	Trp	Arg	
			100					105					110			
Pro	Ile	Phe	Arg	Gln	Asn	Trp	Gly	Asn	Met	Lys	Ile	His	Lys	Asn	Phe	
		115					120					125				
Ser	Ile	Asp	Leu	Val	Arg	Asn	Glu	His	Pro	Thr	Trp	Asn	Lys	Lys	Met	
	130					135					140					
Ile	Glu	Leu	Glu	Ala	Ser	Lys	Arg	Phe	Glu	Lys	Tyr	Ala	Arg	Phe	Phe	
145					150					155					160	
Met	Glu	Glu	Thr	Leu	Lys	Leu	Ala	Lys	Lys	Thr	Arg	Lys	Gln	Ala	Asp	
				165					170					175		
Trp	Gly	Tyr	Tyr	Gly	Tyr	Pro	Tyr	Cys	Phe	Asn	Met	Ser	Pro	Asn	Asn	
			180					185					190			
Leu	Val	Pro	Glu	Cys	Asp	Val	Thr	Ala	Met	His	Glu	Asn	Asp	Lys	Met	

		195					200					205					
Ser	Trp	Leu	Phe	Asn	Asn	Gln	Asn	Val	Leu	Leu	Pro	Ser	Val	Tyr	Val		
	210					215					220						
Arg	Gln	Glu	Leu	Thr	Pro	Asp	Gln	Arg	Ile	Gly	Leu	Val	Gln	Gly	Arg		
225					230					235					240		
Val	Lys	Glu	Ala	Val	Arg	Ile	Ser	Asn	Asn	Leu	Lys	His	Ser	Pro	Lys		
				245					250					255			
Val	Leu	Ser	Tyr	Trp	Trp	Tyr	Val	Tyr	Gln	Asp	Glu	Thr	Asn	Thr	Phe		
		260						265					270				
Leu	Thr	Glu	Thr	Asp	Val	Lys	Lys	Thr	Phe	Gln	Glu	Ile	Val	Ile	Asn		
		275				280						285					
Gly	Gly	Asp	Gly	Ile	Ile	Ile	Trp	Gly	Ser	Ser	Ser	Asp	Val	Asn	Ser		
290					295					300							
Leu	Ser	Lys	Cys	Lys	Arg	Leu	Gln	Asp	Tyr	Leu	Leu	Thr	Val	Leu	Gly		
305					310					315					320		
Pro	Ile	Ala	Ile	Asn	Val	Thr	Glu	Ala	Val	Asn							
				325					330								

<210> 170
 <211> 227
 <212> PRT
 <213> *Vespula vulgaris* (Yellow jacket) (Wasp)

Met	Glu	Ile	Ser	Gly	Leu	Val	Tyr	Leu	Ile	Ile	Ile	Val	Thr	Ile	Ile		
1				5				10					15				
Asp	Leu	Pro	Tyr	Gly	Lys	Ala	Asn	Asn	Tyr	Cys	Lys	Ile	Lys	Cys	Leu		
			20				25					30					
Lys	Gly	Gly	Val	His	Thr	Ala	Cys	Lys	Tyr	Gly	Ser	Leu	Lys	Pro	Asn		
		35				40					45						
Cys	Gly	Asn	Lys	Val	Val	Val	Ser	Tyr	Gly	Leu	Thr	Lys	Gln	Glu	Lys		
50					55					60							
Gln	Asp	Ile	Leu	Lys	Glu	His	Asn	Asp	Phe	Arg	Gln	Lys	Ile	Ala	Arg		
65				70					75					80			
Gly	Leu	Glu	Thr	Arg	Gly	Asn	Pro	Gly	Pro	Gln	Pro	Pro	Ala	Lys	Asn		
			85					90					95				
Met	Lys	Asn	Leu	Val	Trp	Asn	Asp	Glu	Leu	Ala	Tyr	Val	Ala	Gln	Val		
		100					105					110					
Trp	Ala	Asn	Gln	Cys	Gln	Tyr	Gly	His	Asp	Thr	Cys	Arg	Asp	Val	Ala		
		115				120					125						
Lys	Tyr	Gln	Val	Gly	Gln	Asn	Val	Ala	Leu	Thr	Gly	Ser	Thr	Ala	Ala		
	130				135						140						
Lys	Tyr	Asp	Asp	Pro	Val	Lys	Leu	Val	Lys	Met	Trp	Glu	Asp	Glu	Val		
145				150					155					160			
Lys	Asp	Tyr	Asn	Pro	Lys	Lys	Lys	Phe	Ser	Gly	Asn	Asp	Phe	Leu	Lys		
			165					170					175				
Thr	Gly	His	Tyr	Thr	Gln	Met	Val	Trp	Ala	Asn	Thr	Lys	Glu	Val	Gly		
		180					185					190					
Cys	Gly	Ser	Ile	Lys	Tyr	Ile	Gln	Glu	Lys	Trp	His	Lys	His	Tyr	Leu		
		195				200					205						
Val	Cys	Asn	Tyr	Gly	Pro	Ser	Gly	Asn	Phe	Met	Asn	Glu	Glu	Leu	Tyr		
	210				215						220						
Gln	Thr	Lys															
225																	

<210> 171
 <211> 206
 <212> PRT
 <213> *Vespula vidua* (Yellow jacket) (Wasp)

<400> 171

Lys	Val	Asn	Tyr	Cys	Lys	Ile	Lys	Cys	Leu	Lys	Gly	Gly	Val	His	Thr
1				5					10					15	
Ala	Cys	Lys	Tyr	Gly	Thr	Ser	Thr	Lys	Pro	Asn	Cys	Gly	Lys	Met	Val
			20					25					30		
Val	Lys	Ala	Tyr	Gly	Leu	Thr	Glu	Ala	Glu	Lys	Gln	Glu	Ile	Leu	Lys
		35					40					45			
Val	His	Asn	Asp	Phe	Arg	Gln	Lys	Val	Ala	Lys	Gly	Leu	Glu	Thr	Arg
	50					55					60				
Gly	Asn	Pro	Gly	Pro	Gln	Pro	Pro	Ala	Lys	Asn	Met	Asn	Asn	Leu	Val
65					70					75				80	
Trp	Asn	Asp	Glu	Leu	Ala	Asn	Ile	Ala	Gln	Val	Trp	Ala	Ser	Gln	Cys
				85					90					95	
Asn	Tyr	Gly	His	Asp	Thr	Cys	Lys	Asp	Thr	Glu	Lys	Tyr	Pro	Val	Gly
			100					105					110		
Gln	Asn	Ile	Ala	Lys	Arg	Ser	Thr	Thr	Ala	Ala	Leu	Phe	Asp	Ser	Pro
		115					120					125			
Gly	Lys	Leu	Val	Lys	Met	Trp	Glu	Asn	Glu	Val	Lys	Asp	Phe	Asn	Pro
		130				135					140				
Asn	Ile	Glu	Trp	Ser	Lys	Asn	Asn	Leu	Lys	Lys	Thr	Gly	His	Tyr	Thr
145					150					155					160
Gln	Met	Val	Trp	Ala	Lys	Thr	Lys	Glu	Ile	Gly	Cys	Gly	Ser	Val	Lys
				165					170					175	
Tyr	Val	Lys	Asp	Glu	Trp	Tyr	Thr	His	Tyr	Leu	Val	Cys	Asn	Tyr	Gly
			180					185					190		
Pro	Ser	Gly	Asn	Phe	Arg	Asn	Glu	Lys	Leu	Tyr	Glu	Lys	Lys		
		195					200					205			

<210> 172

<211> 202

<212> PRT

<213> Vespa mandarinia (Hornet)

<400> 172

Asn	Asn	Tyr	Cys	Lys	Ile	Lys	Cys	Arg	Ser	Gly	Ile	His	Thr	Leu	Cys
1				5					10					15	
Lys	Phe	Gly	Ile	Ser	Thr	Lys	Pro	Asn	Cys	Gly	Lys	Asn	Val	Val	Lys
			20					25					30		
Ala	Ser	Gly	Leu	Thr	Lys	Ala	Glu	Lys	Leu	Glu	Ile	Leu	Lys	Gln	His
		35					40					45			
Asn	Glu	Phe	Arg	Gln	Lys	Val	Ala	Arg	Gly	Leu	Glu	Thr	Arg	Gly	Lys
	50					55					60				
Pro	Gly	Pro	Gln	Pro	Pro	Ala	Lys	Ser	Met	Asn	Thr	Leu	Val	Trp	Asn
65					70					75				80	
Asp	Glu	Leu	Ala	Gln	Ile	Ala	Gln	Val	Trp	Ala	Gly	Gln	Cys	Asp	Tyr
				85					90					95	
Gly	His	Asp	Val	Cys	Arg	Asn	Thr	Ala	Lys	Tyr	Ser	Val	Gly	Gln	Asn
			100					105					110		
Ile	Ala	Glu	Asn	Gly	Ser	Thr	Ala	Ala	Ser	Phe	Ala	Ser	Val	Ser	Asn
		115					120					125			
Met	Val	Gln	Met	Trp	Ala	Asp	Glu	Val	Lys	Asn	Tyr	Gln	Tyr	Gly	Ser
		130				135					140				
Thr	Lys	Asn	Lys	Leu	Ile	Glu	Val	Gly	His	Tyr	Thr	Gln	Met	Val	Trp
145					150					155					160
Ala	Lys	Thr	Lys	Glu	Ile	Gly	Cys	Gly	Ser	Ile	Lys	Tyr	Ile	Glu	Asn
				165					170					175	
Gly	Trp	His	Arg	His	Tyr	Leu	Val	Cys	Asn	Tyr	Gly	Pro	Ala	Gly	Asn
			180					185					190		
Ile	Gly	Asn	Glu	Pro	Ile	Tyr	Glu	Arg	Lys						

<210> 173
 <211> 191
 <212> PRT
 <213> Zea mays (Maize)

<400> 173
 Met Thr Ala Cys Gly Asn Val Pro Ile Phe Lys Asp Gly Lys Gly Cys
 1 5 10 15
 Gly Ser Cys Tyr Glu Val Arg Cys Lys Glu Lys Pro Glu Cys Ser Gly
 20 25 30
 Asn Pro Val Thr Val Phe Ile Thr Asp Met Asn Tyr Glu Pro Ile Ala
 35 40 45
 Pro Tyr His Phe Asp Leu Ser Gly Lys Ala Phe Gly Ser Leu Ala Lys
 50 55 60
 Pro Gly Leu Asn Asp Lys Leu Arg His Cys Gly Ile Met Asp Val Glu
 65 70 75 80
 Phe Arg Arg Val Arg Cys Lys Tyr Pro Ala Gly Gln Lys Ile Val Phe
 85 90 95
 His Ile Glu Lys Gly Cys Asn Pro Asn Tyr Val Ala Val Leu Val Lys
 100 105 110
 Phe Val Ala Asp Asp Gly Asp Ile Val Leu Met Glu Ile Gln Asp Lys
 115 120 125
 Leu Ser Ala Glu Trp Lys Pro Met Lys Leu Ser Trp Gly Ala Ile Trp
 130 135 140
 Arg Met Asp Thr Ala Lys Ala Leu Lys Gly Pro Phe Ser Ile Arg Leu
 145 150 155 160
 Thr Ser Glu Ser Gly Lys Lys Val Ile Ala Lys Asp Ile Ile Pro Ala
 165 170 175
 Asn Trp Arg Pro Asp Ala Val Tyr Thr Ser Asn Val Gln Phe Tyr
 180 185 190

<210> 174
 <211> 73
 <212> DNA
 <213> Unknown

<220>
 <223> Primer sequence

<400> 174
 gctcgagggt ggaggcgggt caggcggagg tggctctggc ggtggcggat cgttcacccc 60
 gccacccgtg aag 73

<210> 175
 <211> 33
 <212> DNA
 <213> Unknown

<220>
 <223> Primer sequence

<400> 175
 ggcggccgct catttaccgg gatttacaga cac

<210> 176
 <211> 32
 <212> PRT

<213> Arachis hypogaea (peanut)

<220>

<221> UNSURE

<222> 1, 4, 11, 12, 27, 30

<223> Xaa = any amino acid

<400> 176

Xaa Gln Gln Xaa Glu Leu Gln Asp Leu Glu Xaa Xaa Gln Ser Gln Leu
1 5 10 15
Glu Asp Ala Asn Leu Arg Pro Arg Glu Gln Xaa Leu Met Xaa Lys Ile
20 25 30

<210> 177

<211> 32

<212> PRT

<213> Arachis hypogaea (peanut)

<220>

<221> UNSURE

<222> 1, 4, 8, 10, 11, 12, 27, 30

<223> Xaa = any amino acid

<400> 177

Xaa Gln Gln Xaa Glu Leu Gln Xaa Asp Xaa Xaa Xaa Gln Ser Gln Leu
1 5 10 15
Glu Arg Ala Asp Leu Arg Pro Gly Glu Gln Xaa Leu Met Xaa Lys Ile
20 25 30